	L #	Hits	Search Text	DBs	Time Stamp
1	L1	23151	biolumines$ or fluorescen$ near4 protein$1 or luciferase$1 or	US-PGPUB;	2004/01/29 15:15
2	L2	152305	bubble$	US-PGPUB;	2004/01/29 15:16
3	L3	24	1 same 2	US-PGPUB;	2004/01/29 15:16

PGPUB-DOCUMENT-NUMBER: 20030207806

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030207806 A1

TITLE: Insecticidal protein toxins from Photorhabdus

PUBLICATION-DATE: November 6, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
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APPL-NO: 10/ 262794

DATE FILED: October 2, 2002

RELATED-US-APPL-DATA:

child 10262794 A1 20021002

parent division-of 08851567 19970505 US GRANTED

parent-patent 6528484 US

child 08851567 19970505 US

parent continuation-in-part-of 08743699 19961106 US ABANDONED

child 08743699 19961106 US

parent continuation-in-part-of 08705484 19960829 US ABANDONED

child 08705484 19960829 US

parent continuation-in-part-of 08608423 19960228 US ABANDONED

child 08608423 19960228 US

parent continuation-in-part-of 08395947 19950228 US ABANDONED

child 08395947 19950228 US

parent continuation-in-part-of 08063615 19930518 US ABANDONED

US-CL-CURRENT: 514/12, 435/252.3 , 435/419 , 435/69.2 , 530/350 , 536/23.5 , 800/279

ABSTRACT:

Proteins from the genus Photorhabdus are toxic to insects upon exposure. Photorhabdus luminescens (formerly Xenorhabdus luminescens) have been found in mammalian clinical samples and as a bacterial symbiont of entomopathogenic nematodes of genus Heterorhabditis. These protein toxins can be applied to, or genetically engineered into, insect larvae food and plants for insect control.

CROSS-REFERENCE TO RELATED APPLICATION

[0001] This patent application is a continuation-in-part of U.S. patent application Ser. No. 08/743,699 filed on Nov. 6, 1996, which is a continuation-in-part of U.S. patent application Ser. No. 08/705,484 filed on Aug. 28, 1996, which is a continuation-in-part of U.S. patent application Ser. No. 08/608,423 filed Feb. 28, 1996, which is a continuation-in-part of U.S. patent application Ser. No. 08/395,947 filed Feb. 28, 1995, which was a continuation-in-part of U.S. patent application Ser. No. 08/063,615 filed May 18, 1993. This application is also a continuation-in-part of provisional U.S. Patent Application Serial No. 60/007,255 filed Nov. 6, 1995.

---------- KWIC --------

Detail Description Paragraph - DETX (269):

[0263] A luminometer was used to establish the bioluminescence of each strain and provide a quantitative and relative measurement of light production. For measurement of relative light emitting units, the broths from each strain (cells and media) were measured at three time intervals after inoculation in liquid culture (6, 12, and 24 hr) and compared to background luminosity (uninoculated media and water). Prior to measuring light emission from the various broths, cell density was established by measuring light absorbance (560 nM) in a Gilford Systems (Oberlin, Ohio) spectrophotometer using a sipper cell. Appropriate dilutions were then made (to normalize optical density to 1.0 unit) before measuring luminosity. Aliquots of the diluted broths were then placed into cuvettes (300 .mu.l each) and read in a Bio-Orbit 1251 Luminometer (Bio-Orbit Oy, Twiku, Finland). The integration period for each sample was 45 seconds. The samples were continuously mixed (spun in baffled cuvettes) while being read to provide oxygen availability. A positive test was determined as being .gtoreq.5-fold background luminescence (about 5-10 units). In addition, colony luminosity was detected with photographic film overlays and visually, after adaptation in a darkroom. The Gram's staining characteristics of each strain were established with a commercial Gram's stain kit (BBL, Cockeysville, Md.) used in conjunction with Gram's stain control slides (Fisher Scientific, Pittsburgh, Pa.). Microscopic evaluation was then performed using a Zeiss microscope (Carl Zeiss, Germany) 100.times. oil immersion objective lens (with 10.times. ocular and 2.times. body magnification). Microscopic examination of individual strains for organism size, cellular description and inclusion bodies (the latter after logarithmic growth) was performed using wet mount slides (10.times. ocular, 2.times. body and 40.times. objective magnification) with oil immersion and phase contrast microscopy with a micrometer (Akhurst, R. J. and Boemare, N. E. 1990. Entomopathogenic Nematodes in Biological Control (ed. Gaugler, R. and Kaya, H.). pp. 75-90. CRC Press, Boca Raton, USA.; Baghdiguian S., Boyer-Giglio M. H., Thaler, J. O., Bonnot G.,

Boemare N. 1993. Biol. Cell 79, 177-185.). Colony pigmentation was observed after inoculation on Bacto nutrient agar, (Difco Laboratories, Detroit, Mich.) prepared as per label instructions. Incubation occurred at 28.degree. C. and descriptions were produced after 5-7 days. To test for the presence of the enzyme catalase, a colony of the test organism was removed on a small plug from a nutrient agar plate and placed into the bottom of a glass test tube. One ml of a household hydrogen peroxide solution was gently added.down the side of the tube. A positive reaction was recorded when bubbles of gas (presumptive oxygen) appeared immediately or within 5 seconds. Controls of uninoculated nutrient agar and hydrogen peroxide solution were also examined. To test for nitrate reduction, each culture was inoculated into 10 ml of Bacto Nitrate Broth (Difco Laboratories, Detroit, Mich.). After 24 hours incubation at 28.degree. C., nitrite production was tested by the addition of two drops of sulfanilic acid reagent and two drops of alpha-naphthylamine reagent (see Difco Manual, 10th edition, Difco Laboratories, Detroit, Mich., 1984). The generation of a distinct pink or red color indicates the formation of nitrite from nitrate. The ability of each strain to uptake dye from growth media was tested with Bacto MacConkey agar containing the dye neutral red; Bacto Tergitol-7 agar containing the dye bromothymol blue and Bacto EMB Agar containing the dye eosin-Y (agars from Difco Laboratories, Detroit, Mich., all prepared according to label instructions). After inoculation on these media, dye uptake was recorded after incubation at 28.degree. C. for 5 days. Growth on these latter media is characteristic for members of the family Enterobacteriaceae. Motility of each strain was tested using a solution of Bacto Motility Test Medium (Difco Laboratories, Detroit, Mich.) prepared as per label instructions. A butt-stab inoculation was performed with each strain and motility was judged macroscopically by a diffuse zone of growth spreading from the line of inoculum. In many cases, motility was also observed microscopically from liquid culture under wet mount slides. Biochemical nutrient evaluation for each strain was performed using BBL Enterotube II (Benton, Dickinson, Germany). Product instructions were followed with the exception that incubation was carried out at 28.degree. C. for 5 days. Results were consistent with previously cited reports for Photorhabdus. The production of protease was tested by observing hydrolysis of gelatin using Bacto gelatin (Difco Laboratories, Detroit, Mich.) plates made as per label instructions. Cultures were inoculated and the plates were incubated at 28.degree. C. for 5 days. To assess growth at different temperatures, agar plates [2% proteose peptone #3 with two percent Bacto-Agar (Difco, Detroit, Mich.) in deionized water] were streaked from a common source of inoculum. Plates were sealed with Nesco.RTM. film and incubated at 20, 28 and 37.degree. C. for up to three weeks. Plates showing no growth at 37.degree. C. showed no cell viability after transfer to a 28.degree. C. incubator for one week. Oxygen requirements for Photorhabdus strains were tested in the following manner. A butt-stab inoculation into fluid thioglycolate broth medium (Difco, Detroit, Mich.) was made. The tubes were incubated at room temperature for one week and cultures were then examined for type and extent of growth. The indicator resazurin demonstrates the level of medium oxidation or the aerobiosis zone (Difco Manual, 10th edition, Difco Laboratories, Detroit, Mich.). Growth zone results obtained for the Photorhabdus strains tested were consistent with those of a facultative anaerobic microorganism.

Detail Description Paragraph - DETX (393):

[0367] A luminometer was used to establish the bioluminescence associated with these Photorhabdus strains. To measure the presence or absence of relative light emitting units, the broths from each strain (cells and media) were measured at three time intervals after inoculation in liquid culture (24, 48, 72 hr) and compared to background luminosity (uninoculated media). Several Xenorhabdus strains were tested as negative controls for luminosity. Prior to

measuring light emission from the various broths, cell density was established by measuring light absorbance (560 nM) in a Gilford Systems (Oberlin, Ohio) spectrophotometer using a sipper cell. The resulting light emitting units could then be normalized to density of cells. Aliquots of the broths were placed into 96-well microliter plates (100 A1 each) and read in a Packard Lumicount.TM. luminometer (Packard Instrument Co., Meriden, Conn.). The measurement period for each sample was 0.1 to 1.0 second. The samples were agitated in the luminometer for 10 sec prior to taking readings. A positive test was determined as being about 5-fold background luminescence (about 1-15 relative light units). In addition, degree of colony luminosity was confirmed with photographic film overlays and by eye, after visual adaptation in a darkroom. The Gram's staining characteristics of each strain were established with a commercial Gram's stain kit (BBL, Cockeysville, Md.) used in conjunction with Gram's stain control slides (Fisher Scientific, Pittsburgh, Pa.). Microscopic evaluation was then performed using a Zeiss microscope (Carl Zeiss, Germany) 100.times. oil immersion objective lens (with 10.times. ocular and 2.times. body magnification). Microscopic examination of individual strains for organism size, cellular description and inclusion bodies (the latter two observations after logarithmic growth) was performed using wet mount slides (10.times. ocular, 2.times. body and 40.times. objective magnification) and phase contrast microscopy with a micrometer (Akhurst, R. J. and Boemare, N. E. 1990. Entomopathogenic Nematodes in Biological Control (ed. Gaugler, R. and Kaya, H.). pp. 75-90. CRC Press, Boca Raton, USA.; Baghdiguian S., Boyer-Giglio M. H., Thaler, J. O., Bonnot G., Boemare N. 1993. Biol. Cell 79, 177-185.). Colony pigmentation was observed after inoculation on Bacto nutrient agar, (Difco Laboratories, Detroit, Mich.) prepared as per label instructions. Incubation occurred at 28.degree. C. and descriptions were produced after 5 days. To test for the presence of the enzyme catalase, a colony of the test organism was removed on a small plug from a nutrient agar plate and placed into the bottom of a glass test tube. One ml of a household hydrogen peroxide solution was gently added down the side of the tube. A positive reaction was recorded when bubbles of gas (presumptive oxygen) appeared immediately or within 5 seconds. Controls of uninoculated nutrient agar and hydrogen peroxide solution were also examined. To test for nitrate reduction, each culture was inoculated into 10 ml of Bacto Nitrate Broth (Difco Laboratories, Detroit, Mich.). After 24 hours incubation with gentle agitation at 28.degree. C., nitrite production was tested by the addition of two drops of sulfanilic acid reagent and two drops of alpha-naphthylamine reagent (see Difco Manual, 10th edition, Difco Laboratories, Detroit, Mich., 1984). The generation of a distinct pink or red color indicates the formation of nitrite from nitrate whereas the lack of color formation indicates that the strain is nitrate reduction negative. In the latter case, finely powdered zinc was added to further confirm the presence of unreduced nitrate; established by the formation of nitrite and the resultant red color. The ability of each strain to uptake dye from growth media was tested with Bacto MacConkey agar containing the dye neutral red; Bacto Tergitol-7 agar containing the dye bromothymol blue and Bacto EMB Agar containing the dye eosin-Y (formulated agars from Difco Laboratories, Detroit, Mich., all prepared according to label instructions). After inoculation on these media, dye uptake was recorded after incubation at 28.degree. C. for 5 days. Growth on these latter media is characteristic for members of the family Enterobacteriaceae. Motility of each strain was tested using a solution of Bacto Motility Test Medium (Difco Laboratories, Detroit, Mich.) prepared as per label instructions. A butt-stab inoculation was performed with each strain and motility was judged macroscopically by a diffuse zone of growth spreading from the line of inoculum. The production of protease was tested by observing hydrolysis of gelatin using Bacto gelatin (Difco Laboratories, Detroit, Mich.) made as per label instructions. Cultures were inoculated and the tubes or plates were incubated at 28.degree. C. for 5 days. Gelatin hydrolysis was then checked at room temperature, i.e. less than

22.degree. C. To assess growth at different temperatures, agar plates [2% proteose peptone #3 with two percent Bacto-Agar (Difco, Detroit, Mich.) in deionized water] were streaked from a common source of inoculum. Plates were incubated at 20, 28 and 37.degree. C. for up to three weeks. The incubator temperature levels were checked with an electronic thermocouple and meter to insure valid temperature settings. Oxygen requirements for Photorhabdus strains were tested in the following manner. A butt-stab inoculation into fluid thioglycolate broth medium (Difco, Detroit, Mich.) was made. The tubes were incubated at room temperature for one week and cultures were then examined for type and extent of growth. The indicator resazurin demonstrates the presence of medium oxygenation or the aerobiosis zone (Difco Manual, 10th edition, Difco Laboratories, Detroit, Mich.). Growth zone results obtained for the Photorhabdus strains tested were consistent with those of a facultative anaerobic microorganism. In the case of unclear results, the final agar concentration of fluid thioglycolate broth medium was raised to 0.75% and the growth characteristics rechecked.

PGPUB-DOCUMENT-NUMBER: 20030190700

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030190700 A1

TITLE: Synthetic nucleic acid molecule for imparting multiple traits

PUBLICATION-DATE: October 9, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
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Fermin-Munoz, Gustavo Alberto	Hilo	HI	US	

APPL-NO: 10/ 131814

DATE FILED: April 24, 2002

RELATED-US-APPL-DATA:

non-provisional-of-provisional 60286075 20010424 US

US-CL-CURRENT: 435/69.1, 435/235.1 , 435/320.1 , 435/325 , 435/6 , 530/350 , 536/23.2

ABSTRACT:

The present invention is directed to a DNA construct which includes a modified DNA molecule with a nucleotide sequence which is at least 80%, but less than 100%, homologous to two or more desired trait DNA molecules and which imparts the desired trait to plants transformed with the DNA construct. Each of the desired trait DNA molecules relative to the modified nucleic acid molecule have nucleotide sequence similarity values which differ by no more than 3 percentage points. The DNA construct may further include either a silencer or a plurality of modified DNA molecules. The present invention also relates to host cells, plant cells, transgenic plants, and transgenic plant seeds containing such DNA constructs. The present invention is also directed to a method of preparing a modified nucleic acid molecule suitable to impart multiple traits to a plant, a method of determining whether multiple desired traits can be imparted to plants by a single modified DNA molecule, and a method for imparting traits to plants by transforming the plants with the DNA construct.

[0001] This application claims the benefit of U.S. Provisional Patent Application Serial No. 60/286,075, filed Apr. 24, 2001.

---------- KWIC ---------

Brief Description of Drawings Paragraph - DRTX (3):

[0023] FIG. 2 is a schematic representation of the cloning/expression cassette vector pEPJ86GFP. The expression vector is located in a pUC backbone between the HindIII and KpnI sites in the multiple cloning site (MCS) adjacent to the lacZ gene. In the same order, from left to right, the expression cassette contains a double 35S CaMV enhancer (the first two `hatched` regions),

the 35S Cauliflower Mosaic Virus (CaMV) promoter (striped regions with thin vertical lines), the Alfalfa Mosaic Virus leader sequence (region with thick vertical lines), the green fluorescent protein (GFP) gene (region of horizontal lines), and the CaMV 35S terminator sequence (bubbled region). After sequence confirmation the HindIII/KpnI fragments were subcloned into the plant transformation vector pGA482G.

PGPUB-DOCUMENT-NUMBER: 20030118699

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030118699 A1

TITLE: Edible candy makeup

PUBLICATION-DATE: June 26, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Nicosia, Davide	New York	NY	US	

APPL-NO: 10/ 023770

DATE FILED: December 21, 2001

US-CL-CURRENT: 426/104

ABSTRACT:

An edible sugar candy makeup composition made in various flavors, colors and configurations either a homogeneous body or coated with either edible colored lipstick, colored lip balm, and the like for application initially for the lips or the body. The candy can include vitamins, breath fresheners, chocolate, fruit and berry flavors, etc.

---------- KWIC ---------

Summary of Invention Paragraph - BSTX (9):

[0008] U.S. Pat. No. 5,876,995 issued on Mar. 2, 1999, to Bruce Bryan describes bioluminescent novelty items such as toys, paints, slimy play material, clothing textiles, bubble making toys; bath powders, body lotions, gels, powders, creams toothpastes, soaps, body paints, bubble bath; foods such as gelatins, icings and frostings; beverages such as beer, wine, champagne, soft drinks; and glowing ice and fountains, toy cigarettes, fish food, jewelry, inter alia. The articles of manufacture are distinguishable for requiring bioluminescent material.

PGPUB-DOCUMENT-NUMBER: 20030092098

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030092098 A1

TITLE: Renilla reniformis fluorescent proteins, nucleic acids encoding the fluorescent proteins and the use thereof in diagnostics, high throughput screening and novelty items

PUBLICATION-DATE: May 15, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Bryan, Bruce	Beverly Hills	CA	US	
Szent-Gyorgyi, Christopher	Pittsburgh	PA	US	
Szczepaniak, William	Pittsburgh	PA	US	

APPL-NO: 09/ 808898

DATE FILED: March 15, 2001

RELATED-US-APPL-DATA:

non-provisional-of-provisional 60189691 20000315 US

US-CL-CURRENT: 435/69.1, 530/350

ABSTRACT:

Isolated and purified nucleic acids encoding green fluorescent proteins from Renilla reniformis and the green fluorescent protein encoded thereby are also provided. Mutants of the nucleic acid molecules and the modified encoded proteins are also provided. Compositions and combinations comprising the green fluorescent proteins and/or the luciferase are further provided.

RELATED APPLICATIONS

[0001] Benefit of priority under 35 U.S.C. .sctn.119(e) is claimed to U.S. provisional application Serial No. 60/189,691, filed Mar. 15, 2000, to Bryan et al., entitled "RENILLA RENIFORMIS FLUORESCENT PROTEINS, NUCLEIC ACIDS ENCODING THE FLUORESCENT PROTEINS AND THE USE THEREOF IN DIAGNOSTICS, HIGH THROUGHPUT SCREENING AND NOVELTY ITEMS" is claimed.

[0002] This application is related to allowed U.S. application Ser. No. 09/277,716, filed Mar. 26, 1999, to Bruce Bryan and Christopher Szent-Gyorgyi, entitled "LUCIFERASES, FLUORESCENT PROTEINS, NUCLEIC ACIDS ENCODING THE LUCIFERASES AND FLUORESCENT PROTEINS AND THE USE THEREOF IN DIAGNOSTICS, HIGH THROUGHPUT SCREENING AND NOVELTY ITEMS." This application is related to International PCT application No. WO 99/49019 to Bruce Bryan and Prolume, LTD., entitled "LUCIFERASES, FLUORESCENT PROTEINS, NUCLEIC ACIDS ENCODING THE LUCIFERASES AND FLUORESCENT PROTEINS AND THE USE THEREOF IN DIAGNOSTICS, HIGH THROUGHPUT SCREENING AND NOVELTY ITEMS."

[0003] This application is also related to subject matter in U.S. application Ser. No. 08/757,046, filed Nov. 25, 1996, to Bruce Bryan entitled "BIOLUMINESCENT NOVELTY ITEMS", now U.S. Pat. No. 5,876,995, issued Mar. 2, 1999, and in U.S. application Ser. No. 08/597,274, filed Feb. 6, 1996, to

Bruce Bryan, entitled "BIOLUMINESCENT NOVELTY ITEMS". This application is also related to U.S. application Ser. No. 08/908,909, filed Aug. 8, 1997, to Bruce Bryan entitled "DETECTION AND VISUALIZATION OF NEOPLASTIC TISSUE AND OTHER TISSUES". The application is also related to U.S. application Ser. No. 08/990,103, filed Dec. 12, 1997, to Bruce Bryan entitled "APPARATUS AND METHODS FOR DETECTING AND IDENTIFYING INFECTIOUS AGENTS".

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Summary of Invention Paragraph - BSTX (36):

[0034] Combinations of the Renilla reniformis GFP with an articles of manufacture to produce novelty items are provided. These novelty items are designed for entertainment, recreation and amusement, and include, but are not limited to: toys, particularly squirt guns, toy cigarettes, toy "Halloween" eggs, footbags and board/card games; finger paints and other paints, slimy play material; textiles, particularly clothing, such as shirts, hats and sports gear suits, threads and yarns; bubbles in bubble making toys and other toys that produce bubbles; balloons; figurines; personal items, such as cosmetics, bath powders, body lotions, gels, powders and creams, nail polishes, make-up, toothpastes and other dentifrices, soaps, body paints, and bubble bath; items such as inks, paper; foods, such as gelatins, icings and frostings; fish food containing luciferins and transgenic fish, particularly transgenic fish that express a luciferase; plant food containing a luciferin or luciferase, preferably a luciferin for use with transgenic plants that express luciferase; and beverages, such as beer, wine, champagne, soft drinks, and ice cubes and ice in other configurations; fountains, including liquid "fireworks" and other such jets or sprays or aerosols of compositions that are solutions, mixtures, suspensions, powders, pastes, particles or other suitable form. The combinations optionally include a bioluminescence generating system. The bioluminescence generating systems can be provided as two compositions: a first composition containing a luciferase and a second composition containing one or more additional components of a bioluminescence generating system.

Summary of Invention Paragraph - BSTX (59):

[0057] Combinations containing a first composition containing a Renilla reniformis GFP or Ptilosarcus GFP or mixtures thereof and a second composition containing a bioluminescence-generating system for use with inanimate articles of manufacture to produce novelty items are provided. These novelty items, which are articles of manufacture, are designed for entertainment, recreation and amusement, and include, but are not limited to: toys, particularly squirt guns, toy cigarettes, toy "Halloween" eggs, footbags and board/card games; finger paints and other paints, slimy play material; textiles, particularly clothing, such as shirts, hats and sports gear suits, threads and yarns; bubbles in bubble making toys and other toys that produce bubbles; balloons; figurines; personal items, such as bath powders, body lotions, gels, powders and creams, nail polishes, cosmetic including make-up, toothpastes and other dentifrices, soaps, cosmetics, body paints, and bubble bath, bubbles made from non-detergent sources, particularly proteins such as albumin and other non-toxic proteins; in fishing lures and glowing transgenic worms, particularly crosslinked polyacrylamide containing a fluorescent protein and/or components of a bioluminescence generating system, which glow upon contact with water; items such as inks, paper; foods, such as gelatins, icings and frostings; fish food containing luciferins and transgenic animals, such as transgenic fish, worms, monkeys, rodents, ungulates, ovine, ruminants and others, that express a luciferase and/or Renilla reniformis GFP; transgenic worms that express Renilla reniformis GFP and are used as lures; plant food containing a luciferin or luciferase, preferably a luciferin for use with transgenic plants that express

luciferase and Renilla reniformis GFP, transgenic plants that express Renilla reniformis GFP, particularly ornamental plants, such as orchids, roses, and other plants with decorative flowers; transgenic plants and animals in which the Renilla reniformis GFP is a marker for tracking introduction of other genes; and beverages, such as beer, wine, champagne, soft drinks, milk and ice cubes and ice in other configurations containing Renilla reniformis GFP; fountains, including liquid "fireworks" and other such jets or sprays or aerosols of compositions that are solutions, mixtures, suspensions, powders, pastes, particles or other suitable form.

Summary of Invention Paragraph - BSTX (70):

[0068] Kits containing the GFPs for use in the methods, including those described herein, are provided. In one embodiment, the kits containing an article of manufacture and appropriate reagents for generating bioluminescence are provided. The kits containing such soap compositions, with preferably a moderate Ph (between 5 and 8) and bioluminescence generating reagents, including luciferase and luciferin and the GFP are provided herein. These kits, for example, can be used with a bubble-blowing or producing toy. These kits can also include a reloading or charging cartridge or can be used in connection with a food.

Detail Description Paragraph - DETX (183):

[0262] Renilla reniformis GFP is intended for use in any of the novelty items and combinations, such as the foods, including beverages, greeting cards, and toys, including bubble making toys, particularly bubble-making compositions or mixtures. Also of particular interest are the use of these proteins in cosmetics, particularly face paints or make-up, hair colorants or hair conditioners, mousses or other such products and skin creams. Such systems are particularly of interest because no luciferase is needed to activate the photoprotein and because the proteins are non-toxic and safe to apply to the skin, hair, eyes and to ingest. These fluorescent proteins may also be used in addition to bioluminescence generating systems to enhance or create an array of different colors. Transgenic animals and plants that express the Renilla reniformis GFP-encoding nucleic acid are also provided. Such animals and plants, include transgenic fish, transgenic worms for use, for example, as lures for fishing; transgenic animals, such as monkeys and rodents for research in which a marker gene is used, and transgenic animals as novelty items and to produce glowing foods, such as ham, eggs, chicken, and other meats; transgenic plants in which the Renilla reniformis is a marker, and also transgenic plants that are novelty items, particuarly ornamental plants, such as glowing orchids, roses and other flowering plants.

Detail Description Paragraph - DETX (438):

[0515] Renilla reniformis GFP can be used in combination with articles of manufacture to produce novelty items. The Renilla reniformis GFP can be used with a bioluminescence generating system. Such items and methods for preparation are described in detail in U.S. Pat. Nos. 5,876,995, 6,152,358 and 6,113,886) These novelty items, which are articles of manufacture, are designed for entertainment, recreation and amusement, and include, but are not limited to: toys, particularly squirt guns, toy cigarettes, toy "Halloween" eggs, footbags and board/card games; finger paints and other paints, slimy play material; textiles, particularly clothing, such as shirts, hats and sports gear suits, threads and yarns; bubbles in bubble making toys and other toys that produce bubbles; balloons; figurines; personal items, such as bath powders, body lotions, gels, powders and creams, nail polishes, cosmetics including make-up, toothpastes and other dentifrices, soaps, body paints, and bubble

bath; items such as fishing lures, inks, paper; foods, such as gelatins, icings and frostings; fish food containing luciferins and transgenic fish, particularly transgenic fish that express a luciferase; plant food containing a luciferin or luciferase, preferably a luciferin for use with transgenic plants that express luciferase; and beverages, such as beer, wine, champagne, soft drinks, and ice cubes and ice in other configurations; fountains, including liquid "fireworks" and other such jets or sprays or aerosols of compositions that are solutions, mixtures, suspensions, powders, pastes, particles or other suitable form.

Detail Description Paragraph - DETX (456):

[0533] In one embodiment, the kits contain appropriate reagents and an article of manufacture for generating bioluminescence in combination with the article. These kits, for example, can be used with a bubble-blowing or producing toy or with a squirt gun. These kits can also include a reloading or charging cartridge.

PGPUB-DOCUMENT-NUMBER: 20030066096

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030066096 A1

TITLE: Bioluminescent novelty items

PUBLICATION-DATE: April 3, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Bryan, Bruce	Beverly Hills	CA	US	

APPL-NO: 09/ 729133

DATE FILED: December 1, 2000

RELATED-US-APPL-DATA:

child 09729133 A1 20001201

parent continuation-of 09444762 19991122 US PENDING

child 09729133 A1 20001201

parent continuation-of 09135988 19980817 US PATENTED

child 09729133 A1 20001201

parent continuation-in-part-of 08757046 19961125 US PATENTED

child 09729133 A1 20001201

parent continuation-in-part-of 08597274 19960206 US PATENTED

non-provisional-of-provisional 60079624 19980327 US

non-provisional-of-provisional 60089367 19980615 US

US-CL-CURRENT: 800/8, 162/162 , 42/54 , 424/450 , 424/456 , 424/70.14 , 442/131

ABSTRACT:

Novelty items that are combinations of articles of manufacture with fluorescent proteins are provided. These novelty items, which are articles of manufacture, are designed for entertainment, recreation and amusement, and include toys, paints, slimy play material, textiles, particularly clothing, bubbles in bubble making toys and other toys that produce bubbles, balloons, personal items, such as cosmetics, bath powders, body lotions, gels, powders and creams, toothpastes and other dentifrices, soaps, body paints, and bubble bath, foods, such as gelatins, icings and frostings, beverages such as beer, wine, champagne, soft drinks, and glowing ice, fountains, including liquid "fireworks" and other such jets or sprays or aerosols of compositions that are solutions, mixtures, suspensions, powders, pastes, particles or other suitable formulation.

RELATED APPLICATIONS

[0001] This applicaiton is a continuation of U.S. application Ser. No. 09/444,762 to Bruce Bryan, filed Nov. 22, 1999, entitled "BIOLUMINESCENT NOVELTY ITEMS." This application is also continuation of U.S. application Ser. No. 09/135,988 to Bruce Bryan, filed Aug. 17, 1998, now U.S. Pat. No. 6,152,358, entitled "BIOLUMINESCENT NOVELTY ITEMS." This application is also continuation-in-part of U.S. application Ser. No. 08/757,046 to Bruce Bryan, filed Nov. 25, 1996, now U.S. Pat. No. 5,876,995, entitled "BIOLUMINESCENT NOVELTY ITEMS." This application is also a continuation-in-part of U.S. application Ser. No. 08/597,274, now allowed, to Bruce Bryan, filed Feb. 6, 1996, entitled "BIOLUMINESCENT NOVELTY ITEMS".

[0002] U.S. application Ser. No. 09/444,762 is a continuation of U.S. application Ser. No. 09/135,988, which is a continuation-in-part of U.S. application Ser. No. 08/757,046, which is a continuation-in-part of U.S. application Ser. No. 08/597,274. The subject matter of each of U.S. application Ser. Nos. 09/135,988, 08/597,274 and 08/757,046 is herein incorporated in its entirety by reference thereto. This application is also related to provisional application serial numbers 60/079,624 and 60/089,367. The disclosures of each of the above noted patents, applications and provisional applications is incorporated herein by reference thereto.

---------- KWIC ---------

Abstract Paragraph - ABTX (1):

Novelty items that are combinations of articles of manufacture with fluorescent proteins are provided. These novelty items, which are articles of manufacture, are designed for entertainment, recreation and amusement, and include toys, paints, slimy play material, textiles, particularly clothing, bubbles in bubble making toys and other toys that produce bubbles, balloons, personal items, such as cosmetics, bath powders, body lotions, gels, powders and creams, toothpastes and other dentifrices, soaps, body paints, and bubble bath, foods, such as gelatins, icings and frostings, beverages such as beer, wine, champagne, soft drinks, and glowing ice, fountains, including liquid "fireworks" and other such jets or sprays or aerosols of compositions that are solutions, mixtures, suspensions, powders, pastes, particles or other suitable formulation.

Summary of Invention Paragraph - BSTX (15):

[0012] Systems and apparatus for generating bioluminescence, and combinations of these systems and apparatus with inanimate articles of manufacture to produce novelty items are provided. These novelty items, which are articles of manufacture, are designed for entertainment, recreation and amusement, and include, but are not limited to: toys, particularly squirt guns, toy cigarettes, toy "Halloween" eggs, footbags and board/card games; finger paints and other paints, slimy play material; textiles, particularly clothing, such as shirts, hats and sports gear suits, threads and yarns; bubbles in bubble making toys and other toys that produce bubbles; balloons; figurines; personal items, such as bath powders, body lotions, gels, powders and creams, nail polishes, make-up, toothpastes and other dentifrices, soaps, body paints, and bubble bath; items such as inks, paper; foods, such as gelatins, popcorn, icings and frostings; fish food containing luciferins and transgenic fish, particularly transgenic fish that express a luciferse; plant food containing a luciferin or luciferase, preferably a luciferin for use with transgenic plants that express luciferase; and beverages, such as beer, wine, champagne, soft drinks, and ice cubes and ice in other configurations; fountains, including liquid "fireworks" and other such jets or sprays or aerosols of compositions

that are solutions, mixtures, suspensions, powders, pastes, particles or other suitable form.

Summary of Invention Paragraph - BSTX (16):

[0013] Thus, the novelty items provided herein include but are not limited to: textiles that glow, ink that glows, paints, particularly fingerpaints, that glow, paper products that glow, toys, particularly reloadable squirt guns that eject a bioluminescent fluid, dolls and dummies with internal organs or parts that glow, figurines and novelty items that glow; toy "cigarettes" that produce glowing "smoke" upon exhalation, toy eggs with glowing yolks and/or whites, toy footbags that glow and toy board and card games with glowing parts, such as glowing cards, dice, game boards, etc.; foods and beverages that glow, soapy compositions for blowing bubbles that produce bubbles that glow, bubble bath compositions that produce bubbles that glow, fountains that expel glowing fluid, bioluminescent "fireworks", sparklers, magic-wand toys, and numerous other such items. Food containing a luciferin for use with plants and animals that express luciferase, such as transgenic fish, then when fed a food containing an appropriate substrate glow, is also contemplated herein.

Detail Description Paragraph - DETX (91):

[0148] Novelty items are understood by those of skill in manufacture of such items as well as by the purchasing public and are intended herein to include items, such as, toys, including toy guns, dolls, dummies, figurines, balloons, bubbles, "fairy dust", such as micronized lyophilized particles, puzzles, and inks and paints, particularly fingerpaints; theatrical vapors when mixed, for example with dry ice or a fog; souvenirs; textiles, particularly clothing, including T-shirts, hats, swimsuits, bathing suit, wet suits, scuba diving suits, surfing suits, and other water sport or sports attire; foods and beverages, including gelatins, ice cubes and ice in other shapes, beer, wine, champagne, soft drinks, ice creams, sorbets, ices, frostings, and candy; jewelry, medallions, decorative articles, artificial flowers, articles for displaying names, business tradenames, slogans, trademarks on promotional or other such items, such as T-shirts, hats, paints, wrapping paper, gifts intended to promote business goodwill; personal items, such as body paints, body sprays, bubble baths, make-up, body lotions, dentifrices; fountains; jets or sprays of particles or fluids, including "fireworks", sparklers, and magic-wand toys, and many other such novelty items [see, e.g., U.S. Pat. Nos. 5,435,010, 5,460,022, 5,458,931, 5,435,787, 5,435,010, 5,432,623, 5,421,583, 5,419,558, 5,416,927, 5,413,454, 5,413,332, 5,411,427, 5,410,962, 5,407,691, 5,407,391, 5,405,958, 5,405,206, 5,400,698, 5,399,122, 5,398,972, 5,397,609, 5,396,408, 5,393,580, 5,390,086, 5,389,033, 5,383,684, 5,374,805, 5,368,518, 5,363,984, 5,360,010, 5,353,378, 5,351,931, 5,346,455, 5,341,538, 5,323,492, 5,283,911, 5,222,797, 5,177,812, 5,158,349, 4,924,358, 3,597,877 and many others, which describe types of items are considered novelty items]. Any such inanimate item that is combined with bioluminescence is intended to be encompassed herein.

Detail Description Paragraph - DETX (160):

[0217] This system is among the preferred systems for use herein. As will be evident, since the aequorin photoprotein includes noncovalently bound luciferin and molecular oxygen, it is suitable for storage in this form as a lyophilized powder or encapsulated into a selected delivery vehicle. The system can be encapsulated into pellets, such as liposomes or other delivery vehicles, or stored in single chamber dual or other multiple chamber apparatus. When used, the vehicles are contacted with a composition, even tap water, that contains Ca.sup.2+ [or other suitable metal ion], to produce a mixture that

glows. This system is preferred for use in numerous embodiments herein, such as in any embodiment that uses pellets. These embodiments include, squirt guns, fairy dust, bubble toys, bubble baths, soaps, linked to textiles, for addition to beverages and foods.

Detail Description Paragraph - DETX (188):
[0245] Lyophilized mixtures, and compositions containing the Renilla luciferase are also provided. The luciferase or mixtures of the luciferase and luciferin may also be encapsulated into a suitable delivery vehicle, such as a liposome, glass particle, capillary tube, drug delivery vehicle, gelatin, time release coating or other such vehicle. Kits containing these mixtures, compositions, or vehicles and also a selected article of manufacture, such as a toy gun, bubble composition, balloon, item of clothing, personal item, are also provided. The luciferase may also be linked to a substrate, such as cotton, polyester, polyester-cotton blends, polypropylene, polyvinyltoluene, polyvinyl propylene, glass, ceramic, or plastics are provided in combination with or as part of an article of manufacture.

Detail Description Paragraph - DETX (213):
[0270] These mutant luciferases as well as the wild type luciferases are among those preferred herein, particularly in instances when a variety of colors are desired or when stability at higher temperatures is desired. It is also noteworthy that firefly luciferases have alkaline pH optima [7.5-9.5], and, thus, are suitable for use in combination with articles of manufacture, such as the bubble compositions that have alkaline pH.

Detail Description Paragraph - DETX (224):
[0281] Addition of ATP and luciferin to a reaction that is exhausted produces additional light emission. Thus, the system, once established, is relatively easily maintained. Therefore, it is highly suitable for use herein in embodiments in which a sustained glow is desired or reuse of the item is contemplated. Thus, the components of a firefly system can be packaged with the item of manufacture, such as a toy gun, and then combined with the article before use. For example, the luciferin and ATP can be added to a mild bubble or a protein composition that contains luciferase each time the bubbles are used.

Detail Description Paragraph - DETX (269):
[0326] GFPs and/or BFPs or other such fluorescent proteins may be used in any of the novelty items and combinations provided herein, such as the beverages and toys, including bubble making toys, particularly bubble-making compositions or mixtures and cosmetics. Such systems are particularly of interest because no luciferase is needed to activate the photoprotein and because the proteins are readily digested. These fluorescent proteins may also be used in addition to bioluminescence generating systems to enhance or create an array of different colors.

Detail Description Paragraph - DETX (278):
[0335] Attachment of phycobiliproteins to solid support matrices is known (e.g., see U.S. Pat. Nos. 4,714,682; 4,767,206; 4,774,189 and 4,867,908). Therefore, phycobiliproteins may be coupled to microcarriers coupled to one or more components of the bioluminescent reaction, preferably a luciferase, to convert the wavelength of the light generated from the bioluminescent reaction. Microcarriers coupled to one or more phycobiliproteins may be used in any of

the novelty items and combinations provided herein, such as the multicolor beverages and toys, including bubble making toys, particularly bubble-making compositions or mixtures.

Detail Description Paragraph - DETX (370):
[0427] Because the bioluminescence generating system components are mixed within the entire bottle, those contents must be used shortly after mixing. Thus, this type of packaging is particularly suitable for use with bioluminescence systems that are consumed in a single use or activity such as bubble-blowing.

Detail Description Paragraph - DETX (392):
[0449] The bioluminescence generating systems provided herein are contemplated for use with various substances to glow the substance. For example, as discussed below, the bioluminescence generating system components may be used to produce glowing aqueous mixtures housed in transparent portions of articles of manufacture, thereby illuminating that portion of the article of manufacture. Additionally, the bioluminescence generating system components may be used to produce glowing food or beverage products, textiles, creams, lotions, gels, soaps, bubbles, papers, powders or water. Following are brief examples of combinations of bioluminescence systems with articles of manufacture and the resulting novelty items contemplated herein.

Detail Description Paragraph - DETX (398):
[0455] Suitable bath powders and bubble baths and other bubble compositions for use in these combinations are well known to those of skill in the art [see, e.g., U.S. Pat. Nos.: 5,478,501 4,565,647; 5,478,490; 5,412,118; 5,401,773; and many other examples]. These may be modified by adding the bioluminescence generating system components.

Detail Description Paragraph - DETX (446):
[0503] Examples of uses of the bioluminescence generating systems in toys include illumination of dolls, toy vehicles, hoolahoops, yo-yos, balloons, immersible bubble generating toys, such as a toy submarine that blows glowing bubbles, and any other toy amenable to having a generally translucent covering defining a space for containment of the bioluminescence generating system and addition of the final ingredients necessary for the illumination reaction. Also contemplated herein are toys that eject or spew a fluid. For example, toy or game projectiles are contemplated that contain a luciferase and bioluminescence substrate in an oxygen-free environment. The projectiles rupture upon impact with a hard surface thereby exposing the contents to moisture in the air that contains dissolved oxygen, the bioluminescence activator, and causing reaction.

Detail Description Paragraph - DETX (473):
[0530] Numerous toy guns and other toy weapons that shoot pellets or liquid, in addition to those exemplified herein, are suitable for use in combination with the bioluminescence generating systems herein. The toy weapons may be loaded with a composition containing microspheres of luciferin and/or luciferase, or with lyophilized luciferin/luciferin, or other mixtures as described herein. Suitable toy weapons and devices that shoot jets or sprays of water are described in the following sampling of U.S. Pat. Nos.: 5,462,469 [toy gun that shoots bubbles]; 5,448,984 [toy gun that shoots balls and water and can be modified to shoot light or temperature sensitive pellets, which

should be stored under appropriate conditions or appropriately packaged, that release luciferin/luciferase when exposed to light]; 5,439,139; 5,427,320; 5,419,458; 5,381,928; 5,377,656; 5,373,975; 5,373,833 and 5,373,832 [which describe toy guns that rely upon a pressurizable bladder for release of air pressure to shoot a projectile, which can be modified to shoot projectiles of encapsulated luciferin/luciferase]; 5,370,278 [which describes liquid from a port mounted to a headband]; 5,366,108; 5,360,142 [which describes a supply and delivery assembly for use in combination with a pump type water gun or other water propelling device]; 5,346,418; 5,343,850 [which describes a projectile launcher for use in combination with the pellets provided herein]; 5,343,849; 5,339,987 [which describes water guns that have at least one pressurizable air/water storage tank, a pressurizing mechanism, a channel of release for shooting water and a release mechanism]; 5,326,303; 5,322,191; 5,305,919; 5,303,847 [which describes a device worn on a user's hard with sheaths for the tips of the fingers that includes a housing for a water reservoir, a water pump and electrical motor and a battery pack to be secured to the user's body]; 5,292,032; 5,284,274 [which describes an action to system including a capsule for containing water, which will herein contain components of a bioluminescence generating system, having an orifice and a plunger and a spring loaded mechanism for driving the water from the orifice. The action toy may be configured as a shotgun accepting a plurality of prefilled shell capsules into its breechblock for firing through its barrel, as a missile launcher in which the capsules are mounted to the front of the launcher and the water is ejected directly from the capsule against the target, or as a crossbow with the bow loading the spring-loaded mechanism and a water stream obtained on release of the bow]; 5,284,272 [which describes a bottle and cap combination for spewing liquid]; 5,256,099; 5,244,153; 5,241,944; 5,238,149; 5,234,129; 5,224,625; 5,213,335; 4,854,480; 5,213,089; 5,184,755; 5,174,477; 5,150,819; 5,141,467; 5,141,462; 5,088,950; 5,071,387 [which describes a figurine-shaped water squirting toy]; 5,064,095 [which describes a water cannon apparatus]; 5,029,732; 5,004,444; 4,892,228; 4,867,208 [which describes an apparatus for storing and dispensing fluid under pressure]; 4,808,143; 4,784,293, 4,768,681; 4,733,799; 4,615,488 and many others. U.S. Pat. No. 5,415,151 describes a toy gun that launches projectiles that can be adapted for shooting the pellets, such as light sensitive pellets that are degraded upon exposure to light, provided herein.

Detail Description Paragraph - DETX (476):

[0533] Such compositions, preferably those that have near neutral pH, can be combined with the components of the bioluminescence generating systems provided herein. In particular, a mixture of luciferase and luciferin, such as the Renilla system or firefly system or Cypridina system, preferably in the form of pellets or microspheres, such as liposomes or other time release capsule, can be added to the bubble mixture. When used, the air added to the mixture will cause a glow, or a glow will be produced as the contents of the pellets are released into the composition. Alternatively, one or more component of the bioluminescence generating system may be added to the bubble making composition, such as, for example, a luciferase and any necessary activators, and the remaining component(s), e.g., a luciferin, may be directly applied to bubbles using a fine spray from an atomizer or other suitable spray or misting means.

Detail Description Paragraph - DETX (477):

[0534] In addition, a fluorescent protein, such as GFP, BFP or a phycobiliprotein, may be added to the bubble-making composition and then illuminated using an external light source. For example, bubbles containing a fluorescent protein may be produced in a room illuminated with light of an

appropriate wavelength to cause the fluorescent protein to fluoresce.

Detail Description Paragraph - DETX (478):
[0535] Alternatively, the fluorescent protein may be added to the bubble-making composition containing all the components of the bioluminescence generating system to effect a change of the color of the bubbles. For example, the fluorescent proteins may be added to the bubble-making composition directly or may be added in time-released or slowly-dissolving microspheres or liposomes, such that release of a fluorescent protein in the bubble composition, such as, for example, GFP or a phycobiliprotein, introduces a change in the color of the bubbles. It is particularly advantageous to have the fluorescent protein released into the composition after the container has been opened and used. A single bottle of bubble-making solution will be amenable to the production of more than one color of bubbles. For example, microparticles or liposomes suspectible to breakdown by exposure to air or by agitation by the wand or stick used for blowing bubbles are of particular interest.

Detail Description Paragraph - DETX (479):
[0536] Kits containing such soap compositions, with preferably a moderate pH [between 5 and 8] and bioluminescence generating reagents, including luciferase and luciferin and the fluorescent protein are provided herein. These kits, for example, can be used with a bubble-blowing or producing toy. These kits can also include a reloading or charging cartridge, suchas the cartridges provided herein.

Detail Description Paragraph - DETX (601):
[0645] FIGS. 12 and 13 illustrate a preferred embodiment of the bottle/bladder apparatus adapted for use with bioluminescent bubble compositions. This bubble composition bottle has a bladder 300 positioned within it and held in place, in the neck 302 of the bottle, by friction. A collar 304 is positioned on the neck of the bottle 302, preventing the cap 306 from being screwed completely onto the top of the bottle. The cap 306 contains a plunger 308 which operates to push the bladder 300 into the body of the bottle when the collar 304 is removed and the cap 306 is screwed down tightly. Upon entering the body of the bottle, the bladder is pierced by a piercing pin 310 located on the bottom of the bottle; thereby releasing the contents of the bladder into the bottle. FIG. 13 shows the bottle with the collar 304 removed, the cap 306 screwed on tightly, and the bladder 300 collapsed within it.

Detail Description Paragraph - DETX (602):
[0646] Component(s) [less than all] of the bioluminescence generating reaction are contained in the bladder. The components may be in the form of a solution, suspension, suspended particles, or particles. Prior to use the bottle may be gently agitated. The particles may be time release capsules that release their contents upon exposure to the bubble composition or from which the contents diffuse upon mixing of the contents of the bladder with the bubble composition. The remaining component(s), such as Ca.sup.2+ or ATP, are contained in the bubble composition 314 which is preferably a mild bubble forming composition. Selection of the bioluminescence generating composition depends upon the selected bubble composition and also the desired action. In other embodiments, remaining components, such as ATP, FMN, a flavin reductase or other component that may be somewhat sensitive to the bubble composition, of the bioluminescence generating system may be added to the bubble composition just prior to use.

Detail Description Paragraph - DETX (603):

[0647] The collar 304 of the bottle is adapted with a bubble blowing ring 312, with arm, integral thereto. Thus, the collar 304 is removed, the bladder 300 pierced within the bottle as described and the bubble blowing ring 312 dipped into the mixed composition, withdrawn and bioluminescent bubbles blown. A standard bubble blowing wand [arm with ring] may be used and/or provided in place of that depicted in FIG. 12.

Detail Description Paragraph - DETX (605):

[0649] The bottle 316 may be fabricated of any material ordinarily used for dispensing bubbles. It may be transparent or translucent to the bioluminescent light so that any glow in the bottle can be seen.

PGPUB-DOCUMENT-NUMBER: 20020019062

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020019062 A1

TITLE: Assay devices

PUBLICATION-DATE: February 14, 2002

INVENTOR-INFORMATION:

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APPL-NO: 09/ 866305

DATE FILED: May 25, 2001

RELATED-US-APPL-DATA:

child 09866305 A1 20010525

parent continuation-in-part-of PCT/US00/13056 20000512 US UNKNOWN

child PCT/US00/13056 20000512 US

parent continuation-in-part-of 09335732 19990618 US PENDING

US-CL-CURRENT: 436/518, 435/287.2

ABSTRACT:

Assay devices are disclosed comprising a base defining a cavity and an insert received in the cavity. The cavity has major surface and at least one sidewall, preferably surrounding the major surface. The insert comprises a first surface with a portion opposing the major surface of the cavity. A space is provided between the portion of the first surface and the major surface for the receipt of a fluid sample. The space has an entrance defined by the first surface of the insert and the major surface. The insert also comprises a second surface opposing the first surface and having an input portion for the application of a fluid sample. The input portion is in fluid communication with the entrance to the space, such that a fluid sample applied to the input portion passes to the entrance to the space and into the space. At least one or more passages is preferably defined through the insert, for passage of the fluid sample through the insert, to the entrance to the space. The second surface of the insert also comprises a reading portion for analyzing the fluid sample in the space. Reagents may be provided in the space for identifying and quantifying the presence of one or more analytes in the fluid sample. Preferably, the assay device is transparent. The portion of the first surface and the first surface of the insert and the major surface of the cavity may be separated by a distance effective to cause capillary flow of the fluid sample into the space from the entrance to the space.

RELATED APPLICATIONS

[0001] The present application is a continuation in part of PCT/US00/13056, filed on May 12, 2000, which is a continuation-in-part of U.S. Ser. No. _____ (to be assigned) (Attorney Docket Number 254/112), filed on May 16, 2001, which is a national phase applications based on PCT/CA99/01079, filed on Nov. 12, 1999, which are both continuation in parts of U.S. Ser. No. 09/335,732, which was filed on Jun. 18, 1999. These application are assigned to the assignee of the present invention and are incorporated by reference herein, in their entireties.

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Detail Description Paragraph - DETX (18):

[0058] The analyte-specific reagents may be printed on the interior surface of the plate using a protein printer. Suitable protein printing devices are well known in the marketplace. A contact printer, such as The Virtex Chipwriter.TM. from Virtex Vision Corporation, Waterloo, Ontario, Canada, for example, is preferred. Other types of printers include ink jet, spray, piezo-electric and bubble jet protein printers. The reagents may be applied in the form of a strip or lane. Test spots may also be provided. Several different analyte-specific detection molecules may be provided to define different lanes or spots for detecting different analytes simultaneously in the same fluid sample. Background and calibration lanes or spots can also be provided. While the reagents may be printed on either or both walls, it is generally easier to print the reagents on the underside 62a, because the insert 50 is smaller than the base 11. Alternatively, reagents in liquid form may be placed onto either or both walls and allowed to dry. For example, luciferin/luciferase reagents for detecting adenosine triphosphate ("ATP"), are typically applied in this manner. After placement of the reagents, the insert 50 is press-fit placed into the chamber 12.

US-PAT-NO: 6602391

DOCUMENT-IDENTIFIER: US 6602391 B2

TITLE: Apparatus and method for combined capillary separation and blotting of biological macromolecules

DATE-ISSUED: August 5, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
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APPL-NO: 09/ 734452

DATE FILED: March 5, 2001

US-CL-CURRENT: 204/464, 204/451 , 204/455 , 204/601 , 204/605 , 204/613

ABSTRACT:

An apparatus and method are described for capillary separation of macromolecules and precise post-separation blotting. Apparatus include disposable separating element (capillary), which contains a sieving or interaction matrix inside, an external layer of blotting material, positioned close to the boundary of said sieving or interaction matrix, and the membrane with changeable permeability for separated material; said membrane separates blotting layer from the sieving or interaction matrix. After separation of macromolecules in capillary with initially non-permeable walls, chemical or physical modification of the membrane is performed, which is followed by changing the vector of driving forces for transfer, so that separated molecules are moved through the walls of the capillary and blotted to the outer layer of separating element, which contains blotting material. Means of modification of the membrane include chemical or physical modification, leading to changes in permeability. Change in driving forces may include electrical charge application, bulk flow of fluid or hydrostatic pressure.

4 Claims, 3 Drawing figures

Exemplary Claim Number: 4

Number of Drawing Sheets: 3

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Brief Summary Text - BSTX (6):

After separation is complete, deposition membrane with blotting material is placed in contact with gel. A common transfer process is called "electro-blot" transfer. In the "electro-blot" transfer process, the macromolecules in the gel slab move under an electric field to a blotting membrane. In designing an electro-blot transfer system it is essential that the blotting membrane be in close contact with the gel slab. Presence of gas bubbles between the gel slab and blotting membrane will prevent the band images from being transferred properly. It is also important to maintain a uniform electric field across the electro-blot sandwich. Transfer of the gel slab onto the nitrocellulose membrane must be carefully performed so that the macromolecules on the gel

membrane are not removed or contaminated. After transfer, a labeling procedure must be employed, and a detection technique must be utilized so that the samples can be analyzed. A commonly used detection method involves staining and de-staining of the gel slab. This technique imposes staining of the entire gel with a dye that only adheres to the macromolecules. Then a de-staining process is performed, wherein dye not adhered to the macromolecules is washed away; bands of macromolecules thus become detectable. Another common detection method is the use of antibodies. Bands of proteins or samples are blotted or transferred to a binding membrane, which binds macromolecules. Then, a known antibody is introduced. The antibody combines with a specific protein if it is present in a sample. In order to detect the antibody-protein combination, the antibodies are labeled with fluorescent or radioactive tags or have enzyme activity, which is further detected by separate methods (F. Ausubel et al (Ed.), Current Protocols in Molecular Biology, Ed. Current Protocols, Wiley, N.Y., 1994, Chapter 10).

US-PAT-NO: 6579557

DOCUMENT-IDENTIFIER: US 6579557 B1

TITLE: Food product comprising gas bubbles

DATE-ISSUED: June 17, 2003

INVENTOR-INFORMATION:

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APPL-NO: 09/ 459485

DATE FILED: December 13, 1999

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
EP	98204442	December 23, 1998

US-CL-CURRENT: 426/603, 426/564 , 426/601

ABSTRACT:

The invention relates to food products comprising an aqueous phase and gas bubbles, whereby said gas bubbles are substantially dispersed in the aqueous phase, and whereby said gas bubbles have a mean diameter size distribution with a maximum below 10 .mu.m and whereby said aqueous phase comprises a compound capable of forming at least a partial coating around said gas bubbles.

Food products are for example cheese, frying fats, dressings, margarines.

16 Claims, 4 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 4

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Detailed Description Text - DETX (15):

Said coating can be made visible by CSLM techniques wherein for example a protein coating can be made visible by **protein specific colouring with a fluorescent** label. In general the shell of for example protein or another compound being capable of formation of at least a partial coating around said gas **bubbles**, is so condensed and comprises such high concentration of the coloured compound, that shells are easily distinguishable.

US-PAT-NO: 6528484

DOCUMENT-IDENTIFIER: US 6528484 B1

TITLE: Insecticidal protein toxins from Photorhabdus

DATE-ISSUED: March 4, 2003

INVENTOR-INFORMATION:

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Sukhapinda; Kitisri	Zionsville	IN	N/A	N/A

APPL-NO: 08/ 851567

DATE FILED: May 5, 1997

PARENT-CASE:

CROSS-REFERENCE TO RELATED APPLICATION

This patent application is a continuation-in-part of U.S. patent application Ser. No. 08/743,699 filed on Nov. 6, 1996 abandoned, which is a continuation-in-part of U.S. patent application Ser. No. 08/705,484 filed on Aug. 29, 1996 abandoned, which is a continuation-in-part of U.S. patent application Ser. No. 08/608,423 filed Feb. 28, 1996 abandoned, which is a continuation-in-part of U.S. patent application Ser. No. 08/395,947 filed Feb. 28, 1995 abandoned, which was a continuation-in-part of U.S. patent application Ser. No. 08/063,615 filed May 18, 1993 abandoned. This application is also a continuation-in-part of provisional U.S. patent application Serial No. 60/007,255 filed Nov. 6, 1995.

US-CL-CURRENT: 514/12, 530/350

ABSTRACT:

Proteins from the genus Photorhabdus are toxic to insects upon exposure. Photorhabdus luminescens (formerly Xenorhabdus luminescens) have been found in mammalian clinical samples and as a bacterial symbiont of entomopathogenic nematodes of genus Heterorhabditis. These protein toxins can be applied to, or genetically engineered into, insect larvae food and plants for insect control.

2 Claims, 9 Drawing figures

Exemplary Claim Number: 2

Number of Drawing Sheets: 9

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Detailed Description Text - DETX (261):

A luminometer was used to establish the bioluminescence of each strain and provide a quantitative and relative measurement of light production. For measurement of relative light emitting units, the broths from each strain (cells and media) were measured at three time intervals after inoculation in liquid culture (6, 12, and 24 hr) and compared to background luminosity (uninoculated media and water). Prior to measuring light emission from the various broths, cell density was established by measuring light absorbance (560 nM) in a Gilford Systems (Oberlin, Ohio) spectrophotometer using a sipper cell. Appropriate dilutions were then made (to normalize optical density to 1.0 unit) before measuring luminosity. Aliquots of the diluted broths were then placed into cuvettes (300 .mu.l each) and read in a Bio-Orbit 1251 Luminometer (Bio-Orbit Oy, Twiku, Finland). The integration period for each sample was 45 seconds. The samples were continuously mixed (spun in baffled cuvettes) while being read to provide oxygen availability. A positive test was determined as being .gtoreq.5-fold background luminescence (about 5-10 units). In addition, colony luminosity was detected with photographic film overlays and visually, after adaptation in a darkroom. The Gram's staining characteristics of each strain were established with a commercial Gram's stain kit (BBL, Cockeysville, Md.) used in conjunction with Gram's stain control slides (Fisher Scientific, Pittsburgh, Pa.). Microscopic evaluation was then performed using a Zeiss microscope (Carl Zeiss, Germany) 100.times.oil immersion objective lens (with 10.times.ocular and 2.times.body magnification). Microscopic examination of individual strains for organism size, cellular description and inclusion bodies (the latter after logarithmic growth) was performed using wet mount slides (10.times.ocular, 2.times.body and 40.times.objective magnification) with oil immersion and phase contrast microscopy with a micrometer (Akhurst, R. J. and Boemare, N. E. 1990. Entomopathogenic Nematodes in Biological Control (ed. Gaugler, R. and Kaya, H.). pp. 75-90. CRC Press, Boca Raton, USA.; Baghdiguian S., Boyer-Giglio M. H., Thaler, J. O., Bonnot G., Boemare N. 1993. Biol. Cell 79, 177-185.). Colony pigmentation was observed after inoculation on Bacto nutrient agar, (Difco Laboratories, Detroit, Mich.) prepared as per label instructions. Incubation occurred at 28.degree. C. and descriptions were produced after 5-7 days. To test for the presence of the enzyme catalase, a colony of the test organism was removed on a small plug from a nutrient agar plate and placed into the bottom of a glass test tube. One ml of a household hydrogen peroxide solution was gently added down the side of the tube. A positive reaction was recorded when bubbles of gas (presumptive oxygen) appeared immediately or within 5 seconds. Controls of uninoculated nutrient agar and hydrogen peroxide solution were also examined. To test for nitrate reduction, each culture was inoculated into 10 ml of Bacto Nitrate Broth (Difco Laboratories, Detroit, Mich.). After 24 hours incubation at 28.degree. C., nitrite production was tested by the addition of two drops of sulfanilic acid reagent and two drops of alpha-naphthylamine reagent (see Difco Manual, 10th edition, Difco Laboratories, Detroit, Mich., 1984). The generation of a distinct pink or red color indicates the formation of nitrite from nitrate.
The ability of each strain to uptake dye from growth media was tested with Bacto MacConkey agar containing the dye neutral red; Bacto Tergitol-7 agar containing the dye bromothymol blue and Bacto EMB Agar containing the dye eosin-Y (agars from Difco Laboratories, Detroit, Mich., all prepared according to label instructions). After inoculation on these media, dye uptake was

recorded after incubation at 28.degree. C. for 5 days. Growth on these latter media is characteristic for members of the family Enterobacteriaceae. Motility of each strain was tested using a solution of Bacto Motility Test Medium (Difco Laboratories, Detroit, Mich.) prepared as per label instructions. A butt-stab inoculation was performed with each strain and motility was judged macroscopically by a diffuse zone of growth spreading from the line of inoculum. In many cases, motility was also observed microscopically from liquid culture under wet mount slides. Biochemical nutrient evaluation for each strain was performed using BBL Enterotube II (Benton, Dickinson, Germany). Product instructions were followed with the exception that incubation was carried out at 28.degree. C. for 5 days. Results were consistent with previously cited reports for Photorhabdus. The production of protease was tested by observing hydrolysis of gelatin using Bacto gelatin (Difco Laboratories, Detroit, Mich.) plates made as per label instructions. Cultures were inoculated and the plates were incubated at 28.degree. C. for 5 days. To assess growth at different temperatures, agar plates [2% proteose peptone #3 with two percent Bacto-Agar (Difco, Detroit, Mich.) in deionized water] were streaked from a common source of inoculum. Plates were sealed with Nesco.RTM. film and incubated at 20, 28 and 37.degree. C. for up to three weeks. Plates showing no growth at 37.degree. C. showed no cell viability after transfer to a 28.degree. C. incubator for one week. Oxygen requirements for Photorhabdus strains were tested in the following manner. A butt-stab inoculation into fluid thioglycolate broth medium (Difco, Detroit, Mich.) was made. The tubes were incubated at room temperature for one week and cultures were then examined for type and extent of growth. The indicator resazurin demonstrates the level of medium oxidation or the aerobiosis zone (Difco Manual, 10th edition, Difco Laboratories, Detroit, Mich.). Growth zone results obtained for the Photorhabdus strains tested were consistent with those of a facultative anaerobic microorganism.

Detailed Description Text - DETX (382):

A luminometer was used to establish the bioluminescence associated with these Photorhabdus strains. To measure the presence or absence of relative light emitting units, the broths from each strain (cells and media) were measured at three time intervals after inoculation in liquid culture (24, 48, 72 hr) and compared to background luminosity (uninoculated media). Several Xenorhabdus strains were tested as negative controls for luminosity. Prior to measuring light emission from the various broths, cell density was established by measuring light absorbance (560 nM) in a Gilford Systems (Oberlin, Ohio) spectrophotometer using a sipper cell. The resulting light emitting units could then be normalized to density of cells. Aliquots of the broths were placed into 96-well microtiter plates (100 .mu.l each) and read in a Packard Lumicount.TM. luminometer (Packard Instrument Co., Meriden, Conn.). The measurement period for each sample was 0.1 to 1.0 second. The samples were agitated in the luminometer for 10 sec prior to taking readings. A positive test was determined as being about 5-fold background luminescence (about 1-15 relative light units). In addition, degree of colony luminosity was confirmed with photographic film overlays and by eye, after visual adaptation in a darkroom. The Gram's staining characteristics of each strain were established with a commercial Gram's stain kit (BBL, Cockeysville, Md.) used in conjunction with Gram's stain control slides (Fisher Scientific, Pittsburgh, Pa.). Microscopic evaluation was then performed using a Zeiss microscope (Carl Zeiss, Germany) 100.times.oil immersion objective lens (with 10.times.ocular and 2.times.body magnification). Microscopic examination of individual strains for organism size, cellular description and inclusion bodies (the latter two observations after logarithmic growth) was performed using wet mount slides (10.times.ocular, 2.times.body and 40.times.objective magnification) and phase contrast microscopy with a micrometer (Akhurst, R. J. and Boemare, N. E. 1990.

Entomopathogenic Nematodes in Biological Control (ed. Gaugler, R. and Kaya, H.). pp. 75-90. CRC Press, Boca Raton, USA.; Baghdiguian S., Boyer-Giglio M. H., Thaler, J. O., Bonnot G., Boemare N. 1993. Biol. Cell 79, 177-185.). Colony pigmentation was observed after inoculation on Bacto nutrient agar, (Difco Laboratories, Detroit, Mich.) prepared as per label instructions. Incubation occurred at 28.degree. C. and descriptions were produced after 5 days. To test for the presence of the enzyme catalase, a colony of the test organism was removed on a small plug from a nutrient agar plate and placed into the bottom of a glass test tube. One ml of a household hydrogen peroxide solution was gently added down the side of the tube. A positive reaction was recorded when bubbles of gas (presumptive oxygen) appeared immediately or within 5 seconds. Controls of uninoculated nutrient agar and hydrogen peroxide solution were also examined. To test for nitrate reduction, each culture was inoculated into 10 ml of Bacto Nitrate Broth (Difco Laboratories, Detroit, Mich.). After 24 hours incubation with gentle agitation at 28.degree. C., nitrite production was tested by the addition of two drops of sulfanilic acid reagent and two drops of alpha-naphthylamine reagent (see Difco Manual, 10th edition, Difco Laboratories, Detroit, Mich., 1984). The generation of a distinct pink or red color indicates the formation of nitrite from nitrate whereas the lack of color formation indicates that the strain is nitrate reduction negative. In the latter case, finely powdered zinc was added to further confirm the presence of unreduced nitrate; established by the formation of nitrite and the resultant red color. The ability of each strain to uptake dye from growth media was tested with Bacto MacConkey agar containing the dye neutral red; Bacto Tergitol-7 agar containing the dye bromothymol blue and Bacto EMB Agar containing the dye eosin-Y (formulated agars from Difco Laboratories, Detroit, Mich., all prepared according to label instructions). After inoculation on these media, dye uptake was recorded after incubation at 28.degree. C. for 5 days. Growth on these latter media is characteristic for members of the family Enterobacteriaceae. Motility of each strain was tested using a solution of Bacto Motility Test Medium (Difco Laboratories, Detroit, Mich.) prepared as per label instructions. A butt-stab inoculation was performed with each strain and motility was judged macroscopically by a diffuse zone of growth spreading from the line of inoculum. The production of protease was tested by observing hydrolysis of gelatin using Bacto gelatin (Difco Laboratories, Detroit, Mich.) made as per label instructions. Cultures were inoculated and the tubes or plates were incubated at 28.degree. C. for 5 days. Gelatin hydrolysis was then checked at room temperature, i.e. less than 22.degree. C. To assess growth at different temperatures, agar plates [2% proteose peptone #3 with two percent Bacto-Agar (Difco, Detroit, Mich.) in deionized water] were streaked from a common source of inoculum. Plates were incubated at 20, 28 and 37.degree. C. for up to three weeks. The incubator temperature levels were checked with an electronic thermocouple and meter to insure valid temperature settings. Oxygen requirements for Photorhabdus strains were tested in the following manner. A butt-stab inoculation into fluid thioglycolate broth medium (Difco, Detroit, Mich.) was made. The tubes were incubated at room temperature for one week and cultures were then examined for type and extent of growth. The indicator resazurin demonstrates the presence of medium oxygenation or the aerobiosis zone (Difco Manual, 10th edition, Difco Laboratories, Detroit, Mich.). Growth zone results obtained for the Photorhabdus strains tested were consistent with those of a facultative anaerobic microorganism. In the case of unclear. results, the final agar concentration of fluid thioglycolate broth medium was raised to 0.75% and the growth characteristics rechecked.

	L #	Hits	Search Text	DBs	Time Stamp
1	L1	23151	biolumines$ or fluorescen$ near4 protein$1 or luciferase$1 or	US-PGPUB;	2004/01/29 15:15
2	L2	152305	bubble$	US-PGPUB;	2004/01/29 15:16
3	L3	24	1 same 2	US-PGPUB;	2004/01/29 15:16
4	L4	83381	toy or novelty	US-PGPUB;	2004/01/29 15:41
5	L5	46	1 and 2 and 4	US-PGPUB;	2004/01/29 15:42

PGPUB-DOCUMENT-NUMBER: 20040019072

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040019072 A1

TITLE: Dimer-selective RXR modulators and methods for their use

PUBLICATION-DATE: January 29, 2004

US-CL-CURRENT: 514/290, 514/567 , 514/569 , 514/570 , 546/79 , 552/271 , 562/440 , 562/490

APPL-NO: 10/ 360580

DATE FILED: February 5, 2003

RELATED-US-APPL-DATA:

child 10360580 A1 20030205

parent division-of 09388888 19990902 US GRANTED

parent-patent 6545049 US

child 09388888 19990902 US

parent division-of 08710427 19960917 US ABANDONED

non-provisional-of-provisional 60004897 19951006 US

non-provisional-of-provisional 60009884 19960111 US

non-provisional-of-provisional 60018318 19960524 US

non-provisional-of-provisional 60021839 19960710 US

RELATED APPLICATIONS

[0001] This application claims the benefit of U.S. Provisional Application No. 60/004,897, filed Oct. 6, 1995; U.S. Provisional Application No. 60/009,884, filed Jan. 10, 1996; U.S. Provisional Application No. 60/018,318, filed May 21, 1996, and U.S. Provisional Application No. 60/021,839, filed Jul. 10, 1996.

PGPUB-DOCUMENT-NUMBER: 20040018974

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040018974 A1

TITLE: Multivalent constructs for therapeutic and diagnostic applications

PUBLICATION-DATE: January 29, 2004

US-CL-CURRENT: 514/12, 530/350

APPL-NO: 10/ 379287

DATE FILED: March 3, 2003

RELATED-US-APPL-DATA:

non-provisional-of-provisional 60440201 20030115 US

non-provisional-of-provisional 60360821 20020301 US

RELATED APPLICATIONS

[0001] This application claims priority from U.S. Provisional Application Serial No. 60/440,201 filed on Jan. 15, 2003, and U.S. Provisional Application Serial No. 60/360,821, filed on Mar. 1, 2002, both of which are incorporated by reference

PGPUB-DOCUMENT-NUMBER: 20030224378

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030224378 A1

TITLE: Novel human protein kinases and protein kinase-like enzymes

PUBLICATION-DATE: December 4, 2003

US-CL-CURRENT: 435/6, 435/194 , 435/320.1 , 435/325 , 435/69.1 , 530/388.26 , 536/23.2

APPL-NO: 10/ 240315

DATE FILED: February 25, 2003

PCT-DATA:
APPL-NO: PCT/US01/11675
DATE-FILED: Apr 10, 2001
PUB-NO:
PUB-DATE:
371-DATE:
102(E)-DATE:

[0001] The present invention claims priority on provisional application serial No. 60/195,953 filed Apr. 10, 2000 and No. 60/201,015, filed May 1, 2000 and No. 60/213,805 filed Jun. 22, 2000, all of which are hereby incorporated by reference in their entirety.

PGPUB-DOCUMENT-NUMBER: 20030211989

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030211989 A1

TITLE: Novel human protein kinases and protein kinase-like enzymes

PUBLICATION-DATE: November 13, 2003

US-CL-CURRENT: 514/12, 435/194 , 435/320.1 , 435/325 , 435/6 , 435/69.1 , 536/23.2

APPL-NO: 10/ 220955

DATE FILED: February 26, 2003

PCT-DATA:
APPL-NO: PCT/US01/06838
DATE-FILED: Mar 2, 2001
PUB-NO:
PUB-DATE:
371-DATE:
102(E)-DATE:

[0001] The present invention claims priority on provisional application serial Nos. 60/187,150, and 60/193,404, and 60/247,103 all of which are hereby incorporated by reference in their entirety.

PGPUB-DOCUMENT-NUMBER: 20030186970

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030186970 A1

TITLE: Androgen receptor modulator compounds and methods

PUBLICATION-DATE: October 2, 2003

US-CL-CURRENT: 514/224.2, 514/229.8 , 514/250 , 514/292 , 544/101 , 544/32 , 544/345 , 546/80

APPL-NO: 10/ 238363

DATE FILED: September 9, 2002

RELATED-US-APPL-DATA:

child 10238363 A1 20020909

parent division-of 09648684 20000825 US GRANTED

parent-patent 6462038 US

non-provisional-of-provisional 60150988 19990827 US

[0001] This application claims priority to U.S. Provisional Application Serial No. 60/150,988, filed Aug. 27, 1999, the entire disclosure of which is incorporated by reference herein.

PGPUB-DOCUMENT-NUMBER: 20030124125

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030124125 A1

TITLE: Oncofetal antigen specific T-lymphocyte mediated immune response: manipulation and uses of oncofetal antigen specific CD4, CD8 cytotoxic and suppressor T cells and interleukin-10

PUBLICATION-DATE: July 3, 2003

US-CL-CURRENT: 424/145.1, 435/372

APPL-NO: 10/ 294524

DATE FILED: November 14, 2002

RELATED-US-APPL-DATA:

child 10294524 A1 20021114

parent continuation-of 09173912 19981016 US ABANDONED

child 09173912 19981016 US

parent continuation-in-part-of 08835069 19970404 US GRANTED

parent-patent 6335174 US

non-provisional-of-provisional 60014903 19960405 US

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a continuation U.S. application Ser. No. 09/173,912, filed Oct. 16, 1998, which is a continuation-in-part of U.S. application Ser. No. 08/835,069, filed Apr. 4, 1997, now U.S. Pat. No. 6,335,174, issued Jan. 1, 2002, and which claims priority to provisional application U.S. Ser. No. 60/014,903, filed Apr. 5, 1996.

PGPUB-DOCUMENT-NUMBER: 20030118699

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030118699 A1

TITLE: Edible candy makeup

PUBLICATION-DATE: June 26, 2003

US-CL-CURRENT: 426/104

APPL-NO: 10/ 023770

DATE FILED: December 21, 2001

PGPUB-DOCUMENT-NUMBER: 20030103958

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030103958 A1

TITLE: Phytases, nucleic acids encoding them and methods for making and using them

PUBLICATION-DATE: June 5, 2003

US-CL-CURRENT: 424/94.6, 435/196 , 435/252.33 , 435/320.1 , 435/69.1 , 536/23.2

APPL-NO: 10/ 156660

DATE FILED: May 24, 2002

RELATED-US-APPL-DATA:

child 10156660 A1 20020524

parent continuation-in-part-of 09866379 20010524 US PENDING

child 09866379 20010524 US

parent continuation-in-part-of 09580515 20000525 US PENDING

child 09580515 20000525 US

parent continuation-in-part-of 09318528 19990525 US GRANTED

parent-patent 6183740 US

child 09318528 19990525 US

parent continuation-in-part-of 09291931 19990413 US GRANTED

parent-patent 6190897 US

child 09291931 19990413 US

parent continuation-of 09259214 19990301 US GRANTED

parent-patent 6110719 US

child 09259214 19990301 US

parent division-of 08910798 19970813 US GRANTED

parent-patent 5876997 US

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a continuation-in-part of U.S. patent application Ser. No. 09/866,379, filed May 24, 2001, which is a continuation-in-part of U.S. Ser. No. 09/580,515, filed May 25, 2000, which is a continuation-in-part of U.S. Ser. No. 09/318,528, filed May 25, 1999, which is a

continuation-in-part of U.S. Ser. No. 09/291,931, filed Apr. 13, 1999, which is a continuation of U.S. Ser. No. 09/259,214, filed Mar. 1, 1999, which is a divisional of U.S. Ser. No. 08/910,798, now U.S. Pat. No. 5,876,997, filed Aug. 13, 1997. Each of the aforementioned applications and patent are explicitly incorporated herein by reference in their entirety and for all purposes.

PGPUB-DOCUMENT-NUMBER: 20030092098

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030092098 A1

TITLE: Renilla reniformis fluorescent proteins, nucleic acids encoding the fluorescent proteins and the use thereof in diagnostics, high throughput screening and novelty items

PUBLICATION-DATE: May 15, 2003

US-CL-CURRENT: 435/69.1, 530/350

APPL-NO: 09/ 808898

DATE FILED: March 15, 2001

RELATED-US-APPL-DATA:

non-provisional-of-provisional 60189691 20000315 US

RELATED APPLICATIONS

[0001] Benefit of priority under 35 U.S.C. .sctn.119(e) is claimed to U.S. provisional application Serial No. 60/189,691, filed Mar. 15, 2000, to Bryan et al., entitled "RENILLA RENIFORMIS FLUORESCENT PROTEINS, NUCLEIC ACIDS ENCODING THE FLUORESCENT PROTEINS AND THE USE THEREOF IN DIAGNOSTICS, HIGH THROUGHPUT SCREENING AND NOVELTY ITEMS" is claimed.

[0002] This application is related to allowed U.S. application Ser. No. 09/277,716, filed Mar. 26, 1999, to Bruce Bryan and Christopher Szent-Gyorgyi, entitled "LUCIFERASES, FLUORESCENT PROTEINS, NUCLEIC ACIDS ENCODING THE LUCIFERASES AND FLUORESCENT PROTEINS AND THE USE THEREOF IN DIAGNOSTICS, HIGH THROUGHPUT SCREENING AND NOVELTY ITEMS." This application is related to International PCT application No. WO 99/49019 to Bruce Bryan and Prolume, LTD., entitled "LUCIFERASES, FLUORESCENT PROTEINS, NUCLEIC ACIDS ENCODING THE LUCIFERASES AND FLUORESCENT PROTEINS AND THE USE THEREOF IN DIAGNOSTICS, HIGH THROUGHPUT SCREENING AND NOVELTY ITEMS."

[0003] This application is also related to subject matter in U.S. application Ser. No. 08/757,046, filed Nov. 25, 1996, to Bruce Bryan entitled "BIOLUMINESCENT NOVELTY ITEMS", now U.S. Pat. No. 5,876,995, issued Mar. 2, 1999, and in U.S. application Ser. No. 08/597,274, filed Feb. 6, 1996, to Bruce Bryan, entitled "BIOLUMINESCENT NOVELTY ITEMS". This application is also related to U.S. application Ser. No. 08/908,909, filed Aug. 8, 1997, to Bruce Bryan entitled "DETECTION AND VISUALIZATION OF NEOPLASTIC TISSUE AND OTHER TISSUES". The application is also related to U.S. application Ser. No. 08/990,103, filed Dec. 12, 1997, to Bruce Bryan entitled "APPARATUS AND METHODS FOR DETECTING AND IDENTIFYING INFECTIOUS AGENTS".

PGPUB-DOCUMENT-NUMBER: 20030066096

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030066096 A1

TITLE: Bioluminescent novelty items

PUBLICATION-DATE: April 3, 2003

US-CL-CURRENT: 800/8, 162/162 , 42/54 , 424/450 , 424/456 , 424/70.14 , 442/131

APPL-NO: 09/ 729133

DATE FILED: December 1, 2000

RELATED-US-APPL-DATA:

child 09729133 A1 20001201

parent continuation-of 09444762 19991122 US PENDING

child 09729133 A1 20001201

parent continuation-of 09135988 19980817 US PATENTED

child 09729133 A1 20001201

parent continuation-in-part-of 08757046 19961125 US PATENTED

child 09729133 A1 20001201

parent continuation-in-part-of 08597274 19960206 US PATENTED

non-provisional-of-provisional 60079624 19980327 US

non-provisional-of-provisional 60089367 19980615 US

RELATED APPLICATIONS

[0001] This applicaiton is a continuation of U.S. application Ser. No. 09/444,762 to Bruce Bryan, filed Nov. 22, 1999, entitled "BIOLUMINESCENT NOVELTY ITEMS." This application is also continuation of U.S. application Ser. No. 09/135,988 to Bruce Bryan, filed Aug. 17, 1998, now U.S. Pat. No. 6,152,358, entitled "BIOLUMINESCENT NOVELTY ITEMS." This application is also continuation-in-part of U.S. application Ser. No. 08/757,046 to Bruce Bryan, filed Nov. 25, 1996, now U.S. Pat. No. 5,876,995, entitled "BIOLUMINESCENT NOVELTY ITEMS." This application is also a continuation-in-part of U.S. application Ser. No. 08/597,274, now allowed, to Bruce Bryan, filed Feb. 6, 1996, entitled "BIOLUMINESCENT NOVELTY ITEMS".

[0002] U.S. application Ser. No. 09/444,762 is a continuation of U.S. application Ser. No. 09/135,988, which is a continuation-in-part of U.S. application Ser. No. 08/757,046, which is a continuation-in-part of U.S. application Ser. No. 08/597,274. The subject matter of each of U.S. application Ser. Nos. 09/135,988, 08/597,274 and 08/757,046 is herein incorporated in its entirety by reference thereto. This application is also

related to provisional application serial numbers 60/079,624 and 60/089,367. The disclosures of each of the above noted patents, applications and provisional applications is incorporated herein by reference thereto.

PGPUB-DOCUMENT-NUMBER: 20030055511

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030055511 A1

TITLE: Shaped particle comprised of bone material and method of making the particle

PUBLICATION-DATE: March 20, 2003

US-CL-CURRENT: 623/23.5, 623/16.11 , 623/23.63 , 623/919

APPL-NO: 10/ 099616

DATE FILED: March 15, 2002

RELATED-US-APPL-DATA:

child 10099616 A1 20020315

parent continuation-in-part-of 09517981 20000303 US PENDING

child 10099616 A1 20020315

parent continuation-in-part-of 09792681 20010223 US PENDING

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] The present application is a Continuation-in-Part Application of U.S. patent application Ser. No. 09/517,981 filed Mar. 3, 2000 and a Continuation-in-Part Application of U.S. patent application Ser. No. 09/792,681 filed Feb. 23, 2001, both of which are incorporated by reference herein in their entirety.

US-PAT-NO: 6649357

DOCUMENT-IDENTIFIER: US 6649357 B2

TITLE: Apparatus and method for detecting and identifying infectious agents

DATE-ISSUED: November 18, 2003

US-CL-CURRENT: 435/7.1, 356/215 , 356/222 , 356/317 , 422/57 , 422/58 , 422/68.1 , 422/82.05 , 422/82.08 , 435/288.7 , 435/6 , 435/7.9 , 435/808 , 435/973 , 435/975 , 436/164 , 436/172 , 436/518 , 436/524 , 436/527 , 436/532 , 436/805

APPL-NO: 10/ 126798

DATE FILED: April 19, 2002

PARENT-CASE:

RELATED APPLICATIONS

This application is a divisional of application Ser. No. 08/990,103 filed Dec. 12, 1997 now U.S. Pat. No. 6,458,547. This application claims priority under 35 U.S.C. .sctn.119(e) to U.S. Provisional application Serial No. 60/037,675, filed Feb. 11, 1997 and to U.S. Provisional application Serial No. 60/033,745, filed Dec. 12, 1996.

Certain subject matter in this application is related to subject matter in U.S. application Ser. No. 08/757,046, filed Nov. 25, 1996, to Bruce Bryan entitled "BIOLUMINESCENT NOVELTY ITEMS" (B), and to U.S. application Ser. No. 08/597,274, filed Feb. 6, 1996, to Bruce Bryan, entitled "BIOLUMINESCENT NOVELTY ITEMS". This application is also related to U.S. application Ser. No. 08/908,909, filed Aug. 8, 1997, to Bruce Bryan entitled "DETECTION AND VISUALIZATION OF NEOPLASMS AND OTHER TISSUES" and to U.S. Provisional application Serial No. 60/023,374, filed Aug. 8, 1996, entitled "DETECTION AND VISUALIZATION OF NEOPLASMS AND OTHER TISSUES", and also to published International PCT application No. WO _____.

The subject matter of each of the above noted U.S. applications, provisional applications and international application is herein incorporated by reference in its entirety.

US-PAT-NO: 6649356

DOCUMENT-IDENTIFIER: US 6649356 B2

TITLE: Apparatus and method for detecting and identifying infectious agents

DATE-ISSUED: November 18, 2003

US-CL-CURRENT: 435/7.1, 356/215 , 356/222 , 356/317 , 422/57 , 422/58 , 422/68.1 , 422/82.05 , 422/82.08 , 435/288.7 , 435/6 , 435/7.9 , 435/808 , 435/973 , 435/975 , 436/122 , 436/164 , 436/518 , 436/524 , 436/527 , 436/532 , 436/805

APPL-NO: 10/ 126139

DATE FILED: April 19, 2002

PARENT-CASE:

RELATED APPLICATIONS

This application is a divisional of application Ser. No. 08/990,103 filed Dec. 12, 1997 now U.S. Pat. No. 6,458,547.This application claims priority under 35 U.S.C. .sctn.119(e) to U.S. Provisional application Serial No. 60/037,675, filed Feb. 11, 1997 and to U.S. Provisional application Serial No. 60/033,745, filed Dec. 12, 1996.

Certain subject matter in this application is related to subject matter in U.S. application Ser. No. 08/757,046, filed Nov. 25, 1996, to Bruce Bryan entitled "BIOLUMINESCENT NOVELTY ITEMS" (B), and to U.S. application Ser. No. 08/597,274, filed Feb. 6, 1996, to Bruce Bryan, entitled "BIOLUMINESCENT NOVELTY ITEMS". This application is also related to U.S. application Ser. No. 08/908,909, filed Aug. 8, 1997, to Bruce Bryan entitled "DETECTION AND VISUALIZATION OF NEOPLASMS AND OTHER TISSUES" and to U.S. Provisional application Ser. No. 60/023,374, filed Aug. 8, 1996, entitled "DETECTION AND VISUALIZATION OF NEOPLASMS AND OTHER TISSUES", and also to published International PCT application No. WO 97/29,319.

The subject matter of each of the above noted U.S. applications, provisional applications and International application is herein incorporated by reference in its entirety.

US-PAT-NO: 6599444

DOCUMENT-IDENTIFIER: US 6599444 B2

TITLE: Luminescent gel coats and moldable resins

DATE-ISSUED: July 29, 2003

US-CL-CURRENT: 252/301.36, 252/500 , 252/513 , 428/690

APPL-NO: 09/ 766415

DATE FILED: January 18, 2001

PARENT-CASE:

This application is a divisional of prior application Ser. No. 09/170,432, filed Oct. 13, 1998, now U.S. Pat. No. 6,207,077.

US-PAT-NO: 6593493

DOCUMENT-IDENTIFIER: US 6593493 B1

TITLE: RXR modulators with improved pharmacologic profile

DATE-ISSUED: July 15, 2003

US-CL-CURRENT: 562/465, 546/339 , 562/426 , 562/444

APPL-NO: 09/ 662211

DATE FILED: September 14, 2000

PARENT-CASE:

This application claims priority to U.S. Provisional Application Ser. No. 60/153,890, filed Sep. 14, 1999, the entire disclosure of which is incorporated by reference herein.

US-PAT-NO: 6545049

DOCUMENT-IDENTIFIER: US 6545049 B1

TITLE: Dimer-selective RXR modulators and methods for their use

DATE-ISSUED: April 8, 2003

US-CL-CURRENT: 514/569, 514/725 , 560/58

APPL-NO: 09/ 388888

DATE FILED: September 2, 1999

PARENT-CASE:

RELATED APPLICATIONS

This is a divisional of application(s) Ser. No. 08/710,427, filed on Sep. 17, 1996, now abandoned which claims the benefit of prior provisional applications under 35 USC 119(e), provisional applications Ser. No. 60/004,897, filed Oct. 6, 1995; Ser. No. 60/009,884, filed Jan. 11, 1996; Ser. No. 60/018,318, filed on May 24, 1996; Ser. No. 60/021,839, filed Jul. 10, 1996.

PGPUB-DOCUMENT-NUMBER: 20040019072

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040019072 A1

TITLE: Dimer-selective RXR modulators and methods for their use

PUBLICATION-DATE: January 29, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
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Badea, Beth Ann	San Diego	CA	US	
Dardashti, Laura J.	Santa Anna	CA	US	
Zhang, Lin	San Diego	CA	US	
Nadzan, Alex M.	San Diego	CA	US	
Heyman, Richard A.	Encinitas	CA	US	
Mukherjee, Ranjan	San Diego	CA	US	
Lala, Deepak S.	San Diego	CA	US	
Farmer, Luc J.	La Jolla	CA	US	

APPL-NO: 10/ 360580

DATE FILED: February 5, 2003

RELATED-US-APPL-DATA:

child 10360580 A1 20030205

parent division-of 09388888 19990902 US GRANTED

parent-patent 6545049 US

child 09388888 19990902 US

parent division-of 08710427 19960917 US ABANDONED

non-provisional-of-provisional 60004897 19951006 US

non-provisional-of-provisional 60009884 19960111 US

non-provisional-of-provisional 60018318 19960524 US

non-provisional-of-provisional 60021839 19960710 US

US-CL-CURRENT: 514/290, 514/567 , 514/569 , 514/570 , 546/79 , 552/271 , 562/440 , 562/490

ABSTRACT:

Dimer-selective RXR modulator compounds having agonist, partial agonist and/or antagonist activity in the context of an RXR homodimer and/or RXR heterodimers are provided. Also provided are pharmaceutical compositions incorporating such dimer-selective RXR modulator compounds and methods for their therapeutic use.

RELATED APPLICATIONS

[0001] This application claims the benefit of U.S. Provisional Application No. 60/004,897, filed Oct. 6, 1995; U.S. Provisional Application No. 60/009,884, filed Jan. 10, 1996; U.S. Provisional Application No. 60/018,318, filed May 21, 1996, and U.S. Provisional Application No. 60/021,839, filed Jul. 10, 1996.

---------- KWIC ---------

Summary of Invention Paragraph - BSTX (12):
[0010] These and various other advantages and features of novelty which characterize the invention are pointed out with particularity in the claims annexed hereto and forming a part hereof. However, for a better understanding of the invention, its advantages, and objects obtained by its use, reference should be had to the accompanying drawings and descriptive matter, in which there is illustrated and described preferred embodiments of the invention.

Detail Description Paragraph - DETX (159):
[0166] A flame-dried 50 mL round-bottomed flask equipped with N.sub.2 bubbler, septa, and stir bar was charged with a 60% dispersion of NaH in mineral oil (0.515 g, 12.9 mmol). The NaH was rinsed free of mineral oil with hexanes (3.times.2 mL). THF (13 mL) was added, followed by the dropwise addition of diethyl cyanomethylphosphonate (3.04 g, 17.2 mmol, 2.82 mL) in THF (8 mL) at room temperature and the solution was stirred for 30 min. The acyl(N-butyl)naphthalene (2.46 g, 8.59 mmol) in THF (10 mL) was added dropwise via cannula to the yellow solution. The solution was stirred for 48 h and then concentrated. The residue was diluted with water (25 mL), and the mixture was extracted with EtOAc (3.times.20 mL). The combined organic extracts were washed with water and brine, dried (Na.sub.2SO.sub.4), filtered, and concentrated to give a dark brown/red oil which was purified by radial chromatography (9:1=hexanes:Et.sub.2O) to give the product 3-(3-butyl-5,6,7,8-tetrahydro-5,5,8,8-tetramethylnaph-thalen-2-yl)but-2-enenitrile 1.14 g (43%) as a yellow oil: .sup.1H-NMR (400 MHz, CDCl.sub.3) .delta. 7.12 (s, 1H, Ar--H), 6.92 (s, 1H, Ar--H), 5.23 (s, 1H, CH), 2.49 (t, 2H, CH.sub.2), 2.37 (s, 3H, CH.sub.3), 1.67 (s, 4H, 2CH.sub.2), 1.53 (m, 2H, CH.sub.2), 1.35 (m, 2H, CH.sub.2), 1.27 (s, 6H, 2CH.sub.3), 1.25 (s, 6H, 2CH.sub.3), 0.93 (t, 3H, CH.sub.3).

Detail Description Paragraph - DETX (160):
[0167] A round-bottomed flask equipped with N.sub.2 bubbler, septa, and stir bar was charged with a solution of the cyano(n-butyl)naphthalene adduct (1.10 g, 3.71 mmol) in hexanes (5 mL) and toluene (5 mL). The solution was cooled to -78.degree. C. and DIBAL (3.71 mL of a 1.0 M solution in toluene, 5.60 mmol) was added dropwise via syringe. After stirring for 1.5 h at -78.degree. C., the solution was quenched with aqueous sodium-potassium tartrate solution (10 mL) and allowed to warm to room temperature over 30 min. The aqueous layer was acidified (1.0 M HCl to pH=4) and extracted with EtOAc (3.times.10 mL). The combined organic extracts were washed with water and brine, dried (Na.sub.2SO.sub.4), filtered, and concentrated to give the crude aldehyde. Purification by radial chromatography (5:1:0.5=hexanes:Et.sub.2O:CH.sub.2Cl.sub.2) gave the aldehyde 3-(3-butyl-5,6,7,8-tetrahydro-5,5,8,8-tetramethylnaphthalen-- 2-yl) but-2-enal 0.911 g (82%) as a yellow solid as a mixture of trans:cis (5:1)isomers: 1H-NMR (trans isomer, CDCl.sub.3) .delta. 10.23 (d, 1H, CHO), 7.13 (s, 1H, Ar--H),

6.96 (s, 1H, Ar--H), 5.98 (d, 1H, olefinic), 2.55 (t, 2H, CH.sub.2), 2.50 (s, 3H, CH.sub.3), 1.67 (s, 4H, 2CH.sub.2), 1.53 (m, 2H, CH.sub.2), 1.35 (m, 2H, CH.sub.2), 1.27 (s, 6H, 2CH.sub.3), 1.25 (s, 6H, 2CH.sub.3), 0.93 (t, 3H, CH.sub.3).

Detail Description Paragraph - DETX (161):

[0168] A flame-dried round-bottomed flask equipped with N.sub.2 bubbler, septa, and stir bar was charged with a solution of diethyl 3-ethoxycarbonyl-2-methyl prop-2-enylphosphonate (0.417 g, 1.58 mmol, 0.39 mL) in THF (2.0 mL) and DMPU (0.7 mL). The solution was cooled to -78.degree. C., and n-BuLi (0.96 mL of a 1.5 M solution in hexanes, 1.44 mmol) was added dropwise via syringe. The reaction mixture was warmed to 0.degree. C. and stirred for 15 min. The red solution was then cooled to -78.degree. C. and the above aldehyde (0.430 g, 1.31 mmol) was added dropwise via cannula. The solution was warmed to ambient temperature and gradually became a dark brown-reddish color. After stirring for 1.5 h, the reaction was quenched with water (15 mL), and the aqueous layer was extracted with EtOAc (3.times.10 mL). The combined organic extracts were washed with aqueous CuSO.sub.4, water, and brine, dried (Na.sub.2SO.sub.4), filtered, and concentrated to give the crude ester as an orange oil. The crude ester in MeOH (7 mL) was hydrolyzed with KOH (excess) at reflux temperature. After 4 h, the reaction was cooled to room temperature and quenched with 1M HCl (5 mL). The solution was concentrated, diluted with water (10 mL), and the aqueous layer was extracted with EtOAc (3.times.15 mL). The combined organic extracts were washed with water and brine, dried (Na.sub.2SO.sub.4), filtered, and concentrated to give the crude product as a mixture of geometric isomers (0.533 g, 94%) as a yellow oil. .sup.1H-NNR indicated a 3:1 mixture of the trans to cis isomers. A sample of the product mixture was purified by radial chromatography (3:1:0.01=hexanes:Et.sub.2O MeOH) followed by preparative silica gel TLC (1% MeOH/CHCl.sub.3) to give (2E, 4E, 6E)-7-[3-(butyl)-5,6,7,8-tetrahydro-5,5,8,8-tetramethyl-2-naphthalen-2-yl-]-3-methylocta-2,4,6-trienoic acid (119) as a yellow solid: .sup.1H-NMR (400 MHz, CDCl.sub.3) .delta. 7.10 (s, 1H, Ar--H), 7.02 (dd, J=11.2, 15.2 Hz, 1H, olefinic), 6.97 (s, 1H, Ar--H), 6.28 (d, J=15.2 Hz, 1H, olefinic), 6.10 (d, J=11.2 Hz, 1H, olefinic), 5.82 (s, 1H, olefinic), 2.52 (t, J=7.9 Hz, 2H, CH.sub.2), 2.40 (s, 3H, CH.sub.3), 2.17 (s, 3H, CH.sub.3), 1.67 (s, 4H, 2CH.sub.2), 1.52 (m, 2H, CH.sub.2), 1.34 (m, 2H, CH.sub.2), 1.28 (s, 6H, 2CH.sub.3), 1.26 (s, 6H, 2CH.sub.3), 0.91 (t, J=7.3 Hz, 3H, CH.sub.3).

Detail Description Paragraph - DETX (434):

[0385] In the co-transfection assay, cloned cDNA for one or more IRs (e.g., human, murine or rat RXR.alpha., RXR.beta., RXR.gamma., PPAR.alpha., VDR, LXR), alone or in combination (i.e. for heterodimer assays) under the control of a constitutive promoter (e.g., the SV 40, RSV or CMV promoter) is introduced by transfection (a procedure to introduce exogenous genes into cells) into a background cell substantially devoid of endogenous IRs. These introduced gene(s) direct the recipient cells to make the IR protein(s) of interest. A further gene is also introduced (co-transfected) into the same cells in conjunction with the IR gene(s). This further gene, comprising the cDNA for a reporter protein, such as firefly luciferase (LUC), controlled by an appropriate hormone responsive promoter containing a hormone response element (HRE). This reporter plasmid functions as a reporter for the transcriptional-modulating activity of the target IR(s). Thus, the reporter acts as a surrogate for the products (mRNA then protein) normally expressed by a gene under control of the target receptor(s) and their native hormone(s).

Detail Description Paragraph - DETX (435):

[0386] The co-transfection assay can detect small molecule agonists or antagonists, including partial agonists and antagonist, of target IRs. Exposing the transfected cells to an agonist ligand compound increases reporter activity in the transfected cells. This activity can be conveniently measured, e.g., by increasing luciferase production and enzymatic activity, which reflects compound-dependent, IR-mediated increases in reporter transcription. To detect antagonists, the co-transfection assay is carried out in the presence of a constant concentration of an known agonist to the target IR (e.g., 4-[(3,5,5,8,8-Pentamethyl-5,6,7,8-tetrahydro-2-naphthyl)ethenyl]benzoic acid (LGD1069, Ligand Pharmaceuticals, Inc.) for RXR.alpha.) known to induce a defined reporter signal. Increasing concentrations of a suspected antagonist will decrease the reporter signal (e.g., luciferase production). The co-transfection assay is therefore useful to detect both agonists and antagonists of specific IRs. Furthermore, it determines not only whether a compound interacts with a particular IR, but whether this interaction mimics (agonizes) or blocks (antagonizes) the effects of native or synthetic regulatory molecules on target gene expression, as well as the specificity and strength of this interaction.

Detail Description Paragraph - DETX (441):

[0391] The basal reporter plasmid .DELTA.-MTV-LUC (Hollenberg and Evans, 55 Cell, 899 (1988), the disclosure of which is herein incorporated by reference) containing an RARE which is referred to as two copies of the TRE-palindromic response element described in Umesono et al., 336 Nature, 262 (1988), the disclosure of which is herein incorporated by reference, was used in transfections for the RARs, and the reporter plasmid CRBPIITKLUC, which contains an RXRE (retinoid X receptor response element, as described in Mangelsdorf et al, 66 Cell, 555 (1991), the disclosure of which is herein incorporated by reference), was used in transfections for the RXRs. Each of these reporter plasmids contains the cDNA for firefly luciferase (LUC) under the control of a promoter containing the appropriate RAR or RXR response element. As noted above, pRS-.beta.-Gal, coding for constitutive expression of E. coli .beta.-galactosidase (.beta.-Gal), was included as an internal control for evaluation of transfection efficiency and compound toxicity.

Detail Description Paragraph - DETX (463):

[0410] Cells were plated in the morning at a density of .about.6.times.10.sup.4 cells/well and allowed to attach for .about.5-6 hours. Cell were then transfected using the calcium phosphate method and precipitates as described in Example 76 and allowed to incubate with the cells for 12-14 hours following which cells were washed 2.times. with phosphate buffered saline (PBS) and incubated with the tested compounds at either 100 nM for LGD 1057 (9-cis retinoic acid: Ligand Pharmaceuticals, Inc.), LG100268 (6-[1-(3,5,5,8,-pentamethyl-5,6,7,8-tetr-ahydronaphthalen-2-yl)cyclopropyl]nicotinic acid. Ligand Pharmaceuticals, Inc.) and LGD 1069(Ligand Pharmaceuticals, Inc.), 500 nM for Compounds 117, 122 and 130 or 1 mM for Compound 131 in charcoal stripped medium for 20-24 hours. Cells were then washed 2.times. with PBS and lysed using Promegca lysis buffer and assayed for luciferase activity and .beta.-galactosidase activity. All results were normalized against .beta.-Gal. Each set was done in triplicates and each experiment was carried out at least 3 separate times with similar results.

Detail Description Paragraph - DETX (464):

[0411] The above assay system was used because reporter activity is

dependent upon the binding of the Gal4 DNA binding domain to copies of its binding site, the UAS (upstream activation sequence), located upstream of the luciferase cDNA. Nagpal et al (1993). Since endogenous receptors lack the Gal4 DNA binding domain, no background activation of the reporter is observed, however, Gal4-receptor LBD fusion proteins can bind the Gal4 site and be activated in a receptor ligand dependent manner. This system, therefore, completely eliminates the low background activity of endogenous receptors in CV-1 cells making it possible to test compound activity on exogenously added receptors.

Detail Description Table CWU - DETL (2):

2TABLE 2 Agonist potency (EC.sub.50 in nM) and fold induction of dimer-selective RXR modulator compounds of the present invention in comparison to the known RXR.alpha. agonist LGD 1069 and known PPAR.alpha. agonist clofibric acid. Fold Activation = Normalized luciferase values at 10-5 M (for RXR modulators and LGD 1069) or at 10-4 M (for clofibric acid) divided by normalized luciferase values with vehicle. EC.sub.50 values were calculated as described in example 76. Compound EC.sub.50 [M] Fold activation 131 8 .times. 10-7 7 135 10-6 5 114 2 .times. 10-7 4 117 9 .times. 10-7 9 122 3 .times. 10-7 7.5 128 2 .times. 10-7 4 LGD1069 3 .times. 10-7 9 Clofibric acid 4 .times. 10-5 6.5

PGPUB-DOCUMENT-NUMBER: 20030124125

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030124125 A1

TITLE: Oncofetal antigen specific T-lymphocyte mediated immune response: manipulation and uses of oncofetal antigen specific CD4, CD8 cytotoxic and suppressor T cells and interleukin-10

PUBLICATION-DATE: July 3, 2003

INVENTOR-INFORMATION:

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Rohrer, James W.	Wilmer	AL	US	
Barsoum, Adel L.	Mobile	AL	US	

APPL-NO: 10/ 294524

DATE FILED: November 14, 2002

RELATED-US-APPL-DATA:

child 10294524 A1 20021114

parent continuation-of 09173912 19981016 US ABANDONED

child 09173912 19981016 US

parent continuation-in-part-of 08835069 19970404 US GRANTED

parent-patent 6335174 US.

non-provisional-of-provisional 60014903 19960405 US

US-CL-CURRENT: 424/145.1, 435/372

ABSTRACT:

Disclosed are methods for detecting cancer or determining the success of cancer therapy in an individual. These methods are based on analyzing the presence or frequency of cloned oncofetal antigen (OFA)- or immature laminin receptor protein (iLRP)-specific T lymphocyte subclasses obtained from the individual and which are stimulated with 44 kD OFA or iLRPA. A frequency of CD8 cytotoxic T cells relative to CD8 T suppressor cells indicates effectiveness of therapy, and a likelihood that protective immunity will develop. Also disclosed are kits for conducting these methods. Further disclosed are methods of rendering T suppressor lymphocytes cytotoxic, and methods of clonally expanding cytotoxic T lymphocytes in vivo.

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a continuation U.S. application Ser. No. 09/173,912, filed Oct. 16, 1998, which is a continuation-in-part of U.S. application Ser. No. 08/835,069, filed Apr. 4, 1997, now U.S. Pat. No. 6,335,174, issued Jan. 1, 2002, and which claims priority to provisional

application U.S. Ser. No. 60/014,903, filed Apr. 5, 1996.

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Detail Description Paragraph - DETX (61):

[0106] At the time of the two week restimulation of the clones to maintain their proliferation, the cloned cells were harvested, washed in IMDM, and a viability count was done. A portion of the cells was saved out to be used in the cytotoxicity assay. Into 8 wells of V-bottomed 96 well plates, were placed 200 .mu.l of medium-washed target 5T lymphoma cells such that there were 10,000 cells/well in the target spontaneous release control and the target maximal release control wells. Into 6 wells/clone of V-bottomed 96 well plates were placed 100 .mu.l of medium-washed target 5T lymphoma cells such that there were 10,000 live target cells/well. Into each of two wells/clone was added 100 .mu.l of medium-washed cloned T cells at 12.5 clone cells: 1 target cell, 25 clone cells: 1 target cells, or 50 clone cells: 1 target cell. These are the experimental wells. Into 6 wells/clone were placed 200 .mu.l of medium-washed cloned T cells at the same concentrations as in the experimental wells except that no target cells are present. These served as the effector spontaneous release wells. The 96 well plates were centrifuged at 250.times.g for 4 minutes to pellet all cells and then incubated for 4 hours at 37.degree. C. in a humidified, 95% air/5% CO.sub.2 atmosphere. At the end of this incubation, 10 .mu.l of 10.times.lysis solution/100 .mu.l of medium was added to each of the maximal release wells to lyse the targets. The plates were then continued to be incubated at 37.degree. C. for another 45 minutes. The plates were then centrifuged at 250.times.g for 4 minutes to pellet remaining cells and 50 .mu.l of culture supernatant from all wells was transferred to a flat-bottomed 96 well ELISA plate. 50 .mu.l of reconstituted substrate mix in assay buffer was then added to each well and the plates were incubated at room temperature for 30 minutes. This substrate solution contained lactate, NAD (nicotinamide-adenine dinucleotide), INT (p-idonitrotetrazolium violet chloride), tetrazolium salt, and the enzyme diaphorase at optimal concentrations for these volumes. 50 .mu.l of stop solution was added to each well, any bubbles were removed and the absorbance at 492 nm wavelength was determined using a Biotek ELISA reader.

Detail Description Paragraph - DETX (267):

[0289] 51. Rosenberg, S. A., B. S. Packard, P. M. Aebersold, D. Solomon, S. L. Topalian, S. T. Toy, P. Simon, M. T. Lotze, J. C. Yang, C. A. Seipp, C. Simpson, C. Carter, S. Bock, D. Schwartzentruber, J. P. Wei, and D. E. White. 1988. Use of tumor infiltrating lymphocytes and interleukin-2 in the immunotherapy of patients with metastatic melanoma: Preliminary report. N. Eng. J. Med. 319:1676.

Detail Description Paragraph - DETX (310):

[0331] For testing the specificity of the established clone proliferation to riLRP, the same procedure for making antigen-bearing NC particles was used except that purified recombinant Brucella abortus protein BCS30 (38), r firefly luciferase, r BAG-1 (39), r OB (leptin), r human IL-9 receptor and riLRP that had been affinity purified with anti-iLRP monoclonal IgG antibodies from hybridomas 43515, 43519, and 43532.

US-PAT-NO: 6545049

DOCUMENT-IDENTIFIER: US 6545049 B1

TITLE: Dimer-selective RXR modulators and methods for their use

DATE-ISSUED: April 8, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Canan-Koch; Stacie	San Diego	CA	N/A	N/A
Hwang; Chan K.	Boulder	CO	N/A	N/A
Boehm; Marcus F.	San Diego	CA	N/A	N/A
Badea; Beth Ann	San Diego	CA	N/A	N/A
Dardashti; Laura J.	Santa Anna	CA	N/A	N/A
Zhang; Lin	San Diego	CA	N/A	N/A
Nadzan; Alex M.	San Diego	CA	N/A	N/A
Heyman; Richard A.	Encinitas	CA	N/A	N/A
Mukherjee; Ranjan	San Diego	CA	N/A	N/A
Lala; Deepak S.	San Diego	CA	N/A	N/A
Farmer; Luc J.	La Jolla	CA	N/A	N/A

APPL-NO: 09/ 388888

DATE FILED: September 2, 1999

PARENT-CASE:

RELATED APPLICATIONS

This is a divisional of application(s) Ser. No. 08/710,427, filed on Sep. 17, 1996, now abandoned which claims the benefit of prior provisional applications under 35 USC 119(e), provisional applications Ser. No. 60/004,897, filed Oct. 6, 1995; Ser. No. 60/009,884, filed Jan. 11, 1996; Ser. No. 60/018,318, filed on May 24, 1996; Ser. No. 60/021,839, filed Jul. 10, 1996.

US-CL-CURRENT: 514/569, 514/725, 560/58

ABSTRACT:

Dimer-selective RXR modulator compounds having agonist, partial agonist and/or antagonist activity in the context of an RXR homodimer and/or RXR heterodimers are provided. Also provided are pharmaceutical compositions incorporating such dimer-selective RXR modulator compounds and methods for their therapeutic use.

36 Claims, 6 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 3

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Brief Summary Text - BSTX (12):

These and various other advantages and features of novelty which characterize the invention are pointed out with particularity in the claims annexed hereto and forming a part hereof. However, for a better understanding of the invention, its advantages, and objects obtained by its use, reference should be had to the accompanying drawings and descriptive matter, in which there is illustrated and described preferred embodiments of the invention.

Detailed Description Text - DETX (133):

A flame-dried 50 mL round-bottomed flask equipped with N.sub.2 bubbler, septa, and stir bar was charged with a 60% dispersion of NaH in mineral oil (0.515 g, 12.9 mmol). The NaH was rinsed free of mineral oil with hexanes (3.times.2 mL). THF (13 mL) was added, followed by the dropwise addition of diethyl cyanomethylphosphonate (3.04 g, 17.2 mmol, 2.82 mL) in THF (8 mL) at room temperature and the solution was stirred for 30 min. The acyl(N-butyl)naphthalene (2.46 g, 8.59 mmol) in THF (10 mL) was added dropwise via cannula to the yellow solution. The solution was stirred for 48 h and then concentrated. The residue was diluted with water (25 mL), and the mixture was extracted with EtOAc (3.times.20 mL). The combined organic extracts were washed with water and brine, dried (Na.sub.2 SO.sub.4), filtered, and concentrated to give a dark brown/red oil which was purified by radial chromatography (9:1=hexanes:Et.sub.2 O) to give the product 3-(3-butyl-5,6,7,8-tetrahydro-5,5,8,8-tetramethylnaphthalen-2-yl) but-2-enenitrile 1.14 g (43%) as a yellow oil: .sup.1 H-NMR (400 MHz, CDCl.sub.3) .delta. 7.12 (s, 1H, Ar-H), 6.92 (s, 1H, Ar-H), 5.23 (s, 1H, CH), 2.49 (t, 2H, CH.sub.2), 2.37 (s, 3H, CH.sub.3), 1.67 (s, 4H, 2CH.sub.2), 1.53 (m, 2H, CH.sub.2), 1.35 (m, 2H, CH.sub.2), 1.27 (s, 6H, 2CH.sub.3), 1.25 (s, 6H, 2CH.sub.3), 0.93 (t, 3H, CH.sub.3).

Detailed Description Text - DETX (134):

A round-bottomed flask equipped with N.sub.2 bubbler, septa, and stir bar was charged with a solution of the cyano(n-butyl)naphthalene adduct (1:10 g, 3.71 mmol) in hexanes (5 mL) and toluene (5 mL). The solution was cooled to -78.degree. C. and DIBAL (3.71 mL of a 1.0 M solution in toluene, 5.60 mmol) was added dropwise via syringe. After stirring for 1.5 h at -78.degree. C., the solution was quenched with aqueous sodium-potassium tartrate solution (10 mL) and allowed to warm to room temperature over 30 min. The aqueous layer was acidified (1.0 M HCl to pH=4) and extracted with EtOAc (3.times.10 mL). The combined organic extracts were washed with water and brine, dried (Na.sub.2 SO.sub.4), filtered, and concentrated to give the crude aldehyde. Purification by radial chromatography (5:1:0.5=hexanes:Et.sub.2 O:CH.sub.2 Cl.sub.2) gave the aldehyde 3-(3-butyl-5,6,7,8-tetrahydro-5,5,8,8-tetramethylnaphthalen-2-yl) but-2-enal 0.911 g (82%) as a yellow solid as a mixture of trans:cis(5:1) isomers: .sup.1 H-NMR (trans isomer, CDCl.sub.3) .delta. 10.23 (d, 1H, CHO), 7.13 (s, 1H, Ar-H) 6.96 (s, 1H, Ar-H), 5.98 (d, 1H, olefinic), 2.58 (t, 2H, CH.sub.2), 2.50 (s, 3H, CH.sub.3), 1.67 (s, 4H, 2CH.sub.2), 1.53 (m, 2H, CH.sub.2), 1.35 (m, 2H, CH.sub.2), 1.27 (s, 6H, 2CH.sub.3), 1.25 (s, 6H, 2CH.sub.3), 0.93 (t, 3H, CH.sub.3).

Detailed Description Text - DETX (135):

A flame-dried round-bottomed flask equipped with N.sub.2 bubbler, septa, and stir bar was charged with a solution of diethyl 3-ethoxycarbonyl-2-methyl prop-2-enylphosphonate (0.417 g, 1.58 mmol, 0.39 mL) in THF (2.0 mL) and DMPU (0.7 mL). The solution was cooled to -78.degree. C., and n-BuLi (0.96 mL of a 1.5 M solution inhexanes, 1.44 mmol) was added dropwise via syringe. The reaction mixture was warmed to 0.degree. C. and stirred for 15 min. The red solution was then cooled to -78.degree. C. and the above aldehyde (0.430 g,

1.31 mmol) was added dropwise via cannula. The solution was warmed to ambient temperature and gradually became a dark brown-reddish color. After stirring for 1.5 h, the reaction was quenched with water (15 mL), and the aqueous layer was extracted with EtOAc (3.times.10 mL). The combined organic extracts were washed with aqueous CuSO.sub.4, water, and brine, dried (Na.sub.2 SO.sub.4), filtered, and concentration to give the crude ester as an orange oil. The crude ester in MeOH (7 mL) was hydrolyzed with KOH (excess) at reflux temperature. After 4 h, the reaction was cooled to room temperature and quenched with 1M HCl (5 mL). The solution was concentrated, diluted with water (10 mL), and the aqueous layer was extracted with EtOAc (3.times.15 mL). The combined organic extracts were washed with water and brine, dried (Na.sub.2 SO.sub.4), filtered, and concentrated to give the crude product as a mixture of geometric isomers (0.533 g, 94%) as a yellow oil. .sup.1 H-NMR indicated a 3:1 mixture of the trans to cis isomers. A sample of the product mixture was purified by radial chromatography (3:1:0.01=hexanes:Et.sub.2 O:MeOH) followed by preparative silica gel TLC (1% MeOH/CHCl.sub.3) to give (2E, 4E, 6E)-7-[3-(butyl)-5,6,7,8-tetrahydro-5,5,8,8-tetramethyl-2-naphthalen-2-yl] -3-methylocta-2,4,6-trienoic acid (119) as a yellow solid: .sup.1 H-NMR (400MHz, CDCl.sub.3) .delta. 7.10 (s, 1H, Ar-H), 7.02 (dd, J=11.2, 15.2 Hz, 1H, olefinic), 6.97 (s, 1H, Ar-H), 6.28 (d, J=15.2 Hz, 1H, olefinic), 6.10 (d, J=11.2 Hz, 1H, olefinic), 5.82 (s, 1H, olefinic), 2.52 (t, J=7.9 Hz, 2H, CH.sub.2), 2.40 (s, 3H, CH.sub.3), 2.17 (s, 3H, CH.sub.3), 1.67 (s, 4H, 2CH.sub.2), 1.52 (m, 2H, CH.sub.2), 1.34 (m, 2H, CH.sub.2), 1.28 (s, 6H, 2CH.sub.3), 1.26 (s, 6H, 2CH.sub.3), 0.91 (t, J=7.3 Hz, 3H, CH.sub.3).

Detailed Description Text - DETX (465):

In the co-transfection assay, cloned cDNA for one or more IRs (e.g., human, murine or rat RXR.alpha., RXR.beta., RXR.gamma., PPAR.alpha., VDR, LXR), alone or in combination (i.e. for heterodimer assays) under hte control of a constitutive promoter (e.g., the SV 40, RSV or CMV promoter) is introduced by transfection (a procedure to introduce exogenous genes into cells) into a background cell substantially devoid of endogenous IRs. These introduced gene(s) direct the recipient cells to make the IR protein(s) of interest. A further gene is also introduced (co-transfected) into the same cells in conjunction with the IR gene(s). This further gene, comprising the cDNA for a reporter protein, such as firefly luciferase (LUC), controlled by an appropriate hormone responsive promoter containing a hormone response element (HRE). This reporter plasmid functions as a reporter for the transcriptional-modulating activity of the target IR(s). Thus, the reporter acts as a surrogate for the products (mRNA then protein) normally expressed by a gene under control of the target receptor(s) and their native hormone(s).

Detailed Description Text - DETX (466):

The co-transfection assay can detect small molecule agonists or antagonists, including partial agonists and antagonist, of target IRs. Exposing the transfected cells to an agonist ligand compound increases reporter activity in the transfected cells. This activity can be conveniently measured, e.g., by increasing luciferase production and enzymatic activity, which reflects compound-dependent, IR-mediated increases in reporter transcription. To detect antagonists, the co-transfection assay is carried out in the presence of a constant concentration of an known agnoists to the target IR (e.g., 4-[(3,5,5,8,8-Pentamethyl-5,6,7,8-tetrahydro-2-naphthyl)ethenyl]benzoic acid (LGD1069, Ligand Pharmaceuticals, Inc.) for RXR.alpha.) known to induce a defined reporter signal. Increasing concentrations of a suspected antagonist will decrease the reporter signal (e.g., luciferase production). The co-transfection assay is therefore useful to detect both agonists and antagonists of specific IRs. Furthermore, it determines not only whether a

compound interacts with a particular IR, but whether this interaction mimics (agonizes) or blocks (antagonizes) the effects of native or synthetic regulatory molecules on target gene expression, as well as the specificity and strength of ths interaction.

Detailed Description Text - DETX (472):

The basal reporter plasmid .DELTA.-MTV-LUC (Hollenberg and Evans, 55 Cell, 899 (1988), the disclosure of which is herein incorporated by reference) containing an RARE which is referred to as two copies of the TRE-palindromic response element described in Umensono et al., 336 Nature, 262 (1988), the disclosure of which is herein incorporated by reference, was used in transfections for the RARs, and the reporter plasmid CRBPIITKLUC, which contains an RXRE (retinoid X receptor response element, as described in Mangelsdorf et al., 66 Cell, 555 (1991), the disclosure of which is herein incorporated by reference), was used in transfections for the RXRs. Each of these reporter plasmids contains the cDNA for firefly luciferase (LUC) under the control of a promoter containing the appropriate RAR or RXR response element. As noted above, pRS-.beta.-Gal, coding for consitutive expression of E. coli .beta.-galactosidase (.beta.-Gal), was included as an internal control for evaluation of transfection efficiency and compound toxicity.

Detailed Description Text - DETX (493):

Cells were plated in the morning at a density of .about.6.times.10.sup.4 cells/well and allowed to attach for .about.5-6 hours. Cell were then transfected using the calcium phosphate method and precipitates as described in Example 76 and allowed to incubate with the cells for 12-14 hours following which cells were washed 2X with phosphate buffered saline (PBS) and incubated with the tested compounds at either 100 nM for LGD1057 (9-cis retinoic acid: Ligand Pharmaceuticals, Inc.), LG100268 (6-[1-(3,5,5,8,8-pentamethyl-5,6,7,8-tetrahydronaphthalen-2-yl)cyclopropyl]nicotinic acid: Ligand Pharmaceuticals, Inc.) and LGD1069(Ligand Pharmaceuticals, Inc.), 500 nM for Compounds 117, 122 and 130 or 1 mM for Compound 131 in charcoal stripped medium for 20-24 hours. Cells were then washed 2X with PBS and lysed using Promega lysis buffer and assayed for luciferase activity and .beta.-galactosidase activity. All results were normalized against .beta.-Gal. Each set was done in triplicates and each experiment was carried out at least 3 separate times with similar results.

Detailed Description Text - DETX (494):

The above assay system was used because reporter activity is dependent upon the binding of the Gal4 DNA binding domain to copies of its binding site, the UAS (upstream activation sequence), located upstream of the luciferase cDNA. Nagpal et al (1993). Since endogenous receptors lack the Gal4 DNA binding domain, no background activation of the reporter is observed, however, Gal4-receptor LBD fusion proteins can bind the Gal4 site and be activated in a receptor ligand dependent manner. This system, therefore, completely eliminates the low background activity of endogenous receptors in CV-1 cells making it possible to test compound activity on exogenously added receptors.

Detailed Description Paragraph Table - DETL (2):

TABLE 2 Agonist potency (EC.sub.50 in nM) and fold induction of dimer-selective RXR modulator compounds of the present invention in comparison to the known RXR.alpha. agonist LGD 1069 and known PPAR.alpha. agonist clofibric acid. Fold Activation = Normalized luciferase values at 10-5M (for RXR modulators and LGD 1069) or at 10-4M (for clofibric acid) divided by

normalized luciferase values with vehicle. EC.sub.50 values were calculated as described in example 76. Compound EC.sub.50 [M] Fold activation 131 8 .times. 10-7 7 135 10-6 5 114 2 .times. 10-7 4 117 9 .times. 10-7 9 122 3 .times. 10-7 7.5 128 2 .times. 10-7 4 LGD1069 3 .times. 10-7 9 Clofibric acid 4 .times. 10-5 6.5

	L #	Hits	Search Text	DBs	Time Stamp
1	L1	23151	biolumines$ or fluorescen$ near4 protein$1 or luciferase$1 or	US-PGPUB;	2004/01/29 15:15
2	L2	152305	bubble$	US-PGPUB;	2004/01/29 15:16
3	L3	24	1 same 2	US-PGPUB;	2004/01/29 15:16
4	L4	83381	toy or novelty	US-PGPUB;	2004/01/29 15:41
5	L5	46	1 and 2 and 4	US-PGPUB;	2004/01/29 15:42
6	L6	28	1 same 4	US-PGPUB;	2004/01/29 15:54

PGPUB-DOCUMENT-NUMBER: 20030118699

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030118699 A1

TITLE: Edible candy makeup

PUBLICATION-DATE: June 26, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Nicosia, Davide	New York	NY	US	

APPL-NO: 10/ 023770

DATE FILED: December 21, 2001

US-CL-CURRENT: 426/104

ABSTRACT:

An edible sugar candy makeup composition made in various flavors, colors and configurations either a homogeneous body or coated with either edible colored lipstick, colored lip balm, and the like for application initially for the lips or the body. The candy can include vitamins, breath fresheners, chocolate, fruit and berry flavors, etc.

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Summary of Invention Paragraph - BSTX (9):

[0008] U.S. Pat. No. 5,876,995 issued on Mar. 2, 1999, to Bruce Bryan describes bioluminescent novelty items such as toys, paints, slimy play material, clothing textiles, bubble making toys, bath powders, body lotions, gels, powders, creams toothpastes, soaps, body paints, bubble bath; foods such as gelatins, icings and frostings; beverages such as beer, wine, champagne, soft drinks; and glowing ice and fountains, toy cigarettes, fish food, jewelry, inter alia. The articles of manufacture are distinguishable for requiring bioluminescent material.

PGPUB-DOCUMENT-NUMBER: 20030113741

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030113741 A1

TITLE: Apparatus and method for detecting and identifying infectious agents

PUBLICATION-DATE: June 19, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Bryan, Bruce J.	Beverly Hills	CA	US	
Gaalema, Stephen	Colorado Springs	CO	US	
Murphy, Randall B.	Irvington	NY	US	

APPL-NO: 10/ 126777

DATE FILED: April 19, 2002

RELATED-US-APPL-DATA:

child 10126777 A1 20020419

parent division-of 08990103 19971212 US GRANTED

parent-patent 6458547 US

non-provisional-of-provisional 60037675 19970211 US

non-provisional-of-provisional 60033745 19961212 US

US-CL-CURRENT: 435/6, 435/287.2 , 435/7.9

ABSTRACT:

Solid phase methods for the identification of an analyte in a biological medium, such as a body fluid, using bioluminescence are provided. A chip designed for performing the method and detecting the bioluminescence is also provided. Methods employing biomineralization for depositing silicon on a matrix support are also provided. A synthetic synapse is also provided.

RELATED APPLICATIONS

[0001] This application claims priority under 35 U.S.C. .sctn.119(e) to U.S. Provisional application Serial No. 60/037,675, filed Feb. 11, 1997 and to U.S. Provisional application Serial No. 60/033,745, filed Dec. 12, 1996.

[0002] Certain subject matter in this application is related to subject matter in U.S. application Ser. No. 08/757,046, filed Nov. 25, 1996, to Bruce Bryan entitled "BIOLUMINESCENT NOVELTY ITEMS" (B), and to U.S. application Ser. No. 08/597,274, filed Feb. 6, 1996, to Bruce Bryan, entitled "BIOLUMINESCENT NOVELTY ITEMS". This application is also related to U.S. application Ser. No. 08/908,909, filed Aug. 8, 1997, to Bruce Bryan entitled "DETECTION AND VISUALIZATION OF NEOPLASMS AND OTHER TISSUES" and to U.S. Provisional application Serial No. 60/023,374, filed Aug. 8, 1996, entitled "DETECTION AND VISUALIZATION OF NEOPLASMS AND OTHER TISSUES", and also to published

International PCT application No. WO 9?/ ,.

[0003] The subject matter of each of the above noted U.S. applications, provisional applications and International application is herein incorporated by reference in its entirety.

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Cross Reference to Related Applications Paragraph - CRTX (2):
[0002] Certain subject matter in this application is related to subject matter in U.S. application Ser. No. 08/757,046, filed Nov. 25, 1996, to Bruce Bryan entitled "BIOLUMINESCENT NOVELTY ITEMS" (B), and to U.S. application Ser. No. 08/597,274, filed Feb. 6, 1996, to Bruce Bryan, entitled "BIOLUMINESCENT NOVELTY ITEMS". This application is also related to U.S. application Ser. No. 08/908,909, filed Aug. 8, 1997, to Bruce Bryan entitled "DETECTION AND VISUALIZATION OF NEOPLASMS AND OTHER TISSUES" and to U.S. Provisional application Serial No. 60/023,374, filed Aug. 8, 1996, entitled "DETECTION AND VISUALIZATION OF NEOPLASMS AND OTHER TISSUES", and also to published International PCT application No. WO 9?/ ,.

Detail Description Paragraph - DETX (194):
[0240] GFPs are activated by blue light to emit green light and thus may be used in the absence of luciferase and in conjunction with an external light source with novelty items, as described herein. Similarly, blue fluorescent proteins (BFPs), such as from Vibrio fischeri, Vibrio harveyi or Photobacterium phosphoreum, may be used in conjunction with an external light source of appropriate wavelength to generate blue light. (See for example, Karatani, et al., "A blue fluorescent protein from a yellow-emitting luminous bacterium," Photochem. Photobiol. 55(2):293-299 (1992); Lee, et al., "Purification of a blue-fluorescent protein from the bioluminescent bacterium Photobacterium phosphoreum" Methods Enzymol. (Biolumin. Chemilumin.) 57:226-234 (1978); and Gast, et al. "Separation of a blue fluorescence protein from bacterial luciferase" Biochem. Biophys. Res. Commun. 80(1):14-21 (1978), each, as all references cited herein, incorporated in its entirety by reference herein.) In particular, GFPs, and/or BFPs or other such fluorescent proteins may be used in the methods provided herein for the detection of infectious agents by binding an analyte to one or more anti ligand-GFP conjugate(s) at a plurality of locations and illuminating the chip with light of an appropriate wavelength to cause the fluorescent proteins to fluoresce whereby the emitted fluorescence is detected by the photodiodoes in the chip.

PGPUB-DOCUMENT-NUMBER: 20030092098

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030092098 A1

TITLE: Renilla reniformis fluorescent proteins, nucleic acids encoding the fluorescent proteins and the use thereof in diagnostics, high throughput screening and novelty items

PUBLICATION-DATE: May 15, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Bryan, Bruce	Beverly Hills	CA	US	
Szent-Gyorgyi, Christopher	Pittsburgh	PA	US	
Szczepaniak, William	Pittsburgh	PA	US	

APPL-NO: 09/ 808898

DATE FILED: March 15, 2001

RELATED-US-APPL-DATA:

non-provisional-of-provisional 60189691 20000315 US

US-CL-CURRENT: 435/69.1, 530/350

ABSTRACT:

Isolated and purified nucleic acids encoding green fluorescent proteins from Renilla reniformis and the green fluorescent protein encoded thereby are also provided. Mutants of the nucleic acid molecules and the modified encoded proteins are also provided. Compositions and combinations comprising the green fluorescent proteins and/or the luciferase are further provided.

RELATED APPLICATIONS

[0001] Benefit of priority under 35 U.S.C. .sctn.119(e) is claimed to U.S. provisional application Serial No. 60/189,691, filed Mar. 15, 2000, to Bryan et al., entitled "RENILLA RENIFORMIS FLUORESCENT PROTEINS, NUCLEIC ACIDS ENCODING THE FLUORESCENT PROTEINS AND THE USE THEREOF IN DIAGNOSTICS, HIGH THROUGHPUT SCREENING AND NOVELTY ITEMS" is claimed.

[0002] This application is related to allowed U.S. application Ser. No. 09/277,716, filed Mar. 26, 1999, to Bruce Bryan and Christopher Szent-Gyorgyi, entitled "LUCIFERASES, FLUORESCENT PROTEINS, NUCLEIC ACIDS ENCODING THE LUCIFERASES AND FLUORESCENT PROTEINS AND THE USE THEREOF IN DIAGNOSTICS, HIGH THROUGHPUT SCREENING AND NOVELTY ITEMS." This application is related to International PCT application No. WO 99/49019 to Bruce Bryan and Prolume, LTD., entitled "LUCIFERASES, FLUORESCENT PROTEINS, NUCLEIC ACIDS ENCODING THE LUCIFERASES AND FLUORESCENT PROTEINS AND THE USE THEREOF IN DIAGNOSTICS, HIGH THROUGHPUT SCREENING AND NOVELTY ITEMS."

[0003] This application is also related to subject matter in U.S. application Ser. No. 08/757,046, filed Nov. 25, 1996, to Bruce Bryan entitled "BIOLUMINESCENT NOVELTY ITEMS", now U.S. Pat. No. 5,876,995, issued Mar. 2, 1999, and in U.S. application Ser. No. 08/597,274, filed Feb. 6, 1996, to

Bruce Bryan, entitled "BIOLUMINESCENT NOVELTY ITEMS". This application is also related to U.S. application Ser. No. 08/908,909, filed Aug. 8, 1997, to Bruce Bryan entitled "DETECTION AND VISUALIZATION OF NEOPLASTIC TISSUE AND OTHER TISSUES". The application is also related to U.S. application Ser. No. 08/990,103, filed Dec. 12, 1997, to Bruce Bryan entitled "APPARATUS AND METHODS FOR DETECTING AND IDENTIFYING INFECTIOUS AGENTS".

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Title - TTL (1):
Renilla reniformis fluorescent proteins, nucleic acids encoding the fluorescent proteins and the use thereof in diagnostics, high throughput screening and novelty items

Cross Reference to Related Applications Paragraph - CRTX (1):
[0001] Benefit of priority under 35 U.S.C. .sctn.119(e) is claimed to U.S. provisional application Serial No. 60/189,691, filed Mar. 15, 2000, to Bryan et al., entitled "RENILLA RENIFORMIS FLUORESCENT PROTEINS, NUCLEIC ACIDS ENCODING THE FLUORESCENT PROTEINS AND THE USE THEREOF IN DIAGNOSTICS, HIGH THROUGHPUT SCREENING AND NOVELTY ITEMS" is claimed.

Cross Reference to Related Applications Paragraph - CRTX (2):
[0002] This application is related to allowed U.S. application Ser. No. 09/277,716, filed Mar. 26, 1999, to Bruce Bryan and Christopher Szent-Gyorgyi, entitled "LUCIFERASES, FLUORESCENT PROTEINS, NUCLEIC ACIDS ENCODING THE LUCIFERASES AND FLUORESCENT PROTEINS AND THE USE THEREOF IN DIAGNOSTICS, HIGH THROUGHPUT SCREENING AND NOVELTY ITEMS." This application is related to International PCT application No. WO 99/49019 to Bruce Bryan and Prolume, LTD., entitled "LUCIFERASES, FLUORESCENT PROTEINS, NUCLEIC ACIDS ENCODING THE LUCIFERASES AND FLUORESCENT PROTEINS AND THE USE THEREOF IN DIAGNOSTICS, HIGH THROUGHPUT SCREENING AND NOVELTY ITEMS."

Cross Reference to Related Applications Paragraph - CRTX (3):
[0003] This application is also related to subject matter in U.S. application Ser. No. 08/757,046, filed Nov. 25, 1996, to Bruce Bryan entitled "BIOLUMINESCENT NOVELTY ITEMS", now U.S. Pat. No. 5,876,995, issued Mar. 2, 1999, and in U.S. application Ser. No. 08/597,274, filed Feb. 6, 1996, to Bruce Bryan, entitled "BIOLUMINESCENT NOVELTY ITEMS". This application is also related to U.S. application Ser. No. 08/908,909, filed Aug. 8, 1997, to Bruce Bryan entitled "DETECTION AND VISUALIZATION OF NEOPLASTIC TISSUE AND OTHER TISSUES". The application is also related to U.S. application Ser. No. 08/990,103, filed Dec. 12, 1997, to Bruce Bryan entitled "APPARATUS AND METHODS FOR DETECTING AND IDENTIFYING INFECTIOUS AGENTS".

Summary of Invention Paragraph - BSTX (34):
[0032] Compositions containing the Renilla reniformis GFP or the Renilla reniformis GFP and luciferase combination are provided. The compositions can take any of a number of forms, depending on the intended method of use therefor. In certain embodiments, for example, the compositions contain a Gaussia luciferase, Gaussia luciferase peptide or Gaussia luciferase fusion protein, formulated for use in luminescent novelty items, immunoassays, donors in FET (fluorescent energy transfer) assays, FRET (fluorescent resonance energy transfer) assays, HTRF (homogeneous time-resolved fluorescence) assays or used in conjunction with multi-well assay devices containing integrated

photodetectors, such as those described herein.

Summary of Invention Paragraph - BSTX (36):
[0034] Combinations of the Renilla reniformis GFP with an articles of manufacture to produce novelty items are provided. These novelty items are designed for entertainment, recreation and amusement, and include, but are not limited to: toys, particularly squirt guns, toy cigarettes, toy "Halloween" eggs, footbags and board/card games; finger paints and other paints, slimy play material; textiles, particularly clothing, such as shirts, hats and sports gear suits, threads and yarns; bubbles in bubble making toys and other toys that produce bubbles; balloons; figurines; personal items, such as cosmetics, bath powders, body lotions, gels, powders and creams, nail polishes, make-up, toothpastes and other dentifrices, soaps, body paints, and bubble bath; items such as inks, paper; foods, such as gelatins, icings and frostings; fish food containing luciferins and transgenic fish, particularly transgenic fish that express a luciferase; plant food containing a luciferin or luciferase, preferably a luciferin for use with transgenic plants that express luciferase; and beverages, such as beer, wine, champagne, soft drinks, and ice cubes and ice in other configurations; fountains, including liquid "fireworks" and other such jets or sprays or aerosols of compositions that are solutions, mixtures, suspensions, powders, pastes, particles or other suitable form. The combinations optionally include a bioluminescence generating system. The bioluminescence generating systems can be provided as two compositions: a first composition containing a luciferase and a second composition containing one or more additional components of a bioluminescence generating system.

Summary of Invention Paragraph - BSTX (37):
[0035] Any article of manufacture that can be combined with a bioluminescence-generating system as provided herein and thereby provide entertainment, recreation and/or amusement, including use of the items for recreation or to attract attention, such as for advertising goods and/or services that are associated with a logo or trademark is contemplated herein. Such uses may be in addition to or in conjunction with or in place of the ordinary or normal use of such items. As a result of the combination, the items glow or produce, such as in the case of squirt guns and fountains, a glowing fluid or spray of liquid or particles. The novelty in the novelty item derives from its bioluminescence.

Summary of Invention Paragraph - BSTX (43):
[0041] Recombinant cells containing heterologous nucleic acid encoding a Renilla reniformis GFP are also provided. Purified Renilla reniformis GFP peptides and compositions containing the Renilla GFPs and GFP peptides alone or in combination with at least one component of a bioluminescence-generating system, such as a Renilla luciferase, are provided. The Renilla GFP and GFP peptide compositions can be used, for example, to provide fluorescent illumination of novelty items or used in methods of detecting and visualizing neoplastic tissue and other tissues, detecting infectious agents using immunoassays, such homogenous immunoassays and in vitro fluorescent-based screening assays using multi-well assay devices, or provided in kits for carrying out any of the above-described methods. In particular, these proteins may be used in FP (fluorescence polarization) assays, FET (fluorescent energy transfer) assays, FRET (fluorescent resonance energy transfer) assays and HTRF (homogeneous time-resolved fluorescence) assays and also in the BRET assays and sensors provided herein.

Summary of Invention Paragraph - BSTX (59):

[0057] Combinations containing a first composition containing a Renilla reniformis GFP or Ptilosarcus GFP or mixtures thereof and a second composition containing a bioluminescence-generating system for use with inanimate articles of manufacture to produce novelty items are provided. These novelty items, which are articles of manufacture, are designed for entertainment, recreation and amusement, and include, but are not limited to: toys, particularly squirt guns, toy cigarettes, toy "Halloween" eggs, footbags and board/card games; finger paints and other paints, slimy play material; textiles, particularly clothing, such as shirts, hats and sports gear suits, threads and yarns; bubbles in bubble making toys and other toys that produce bubbles; balloons; figurines; personal items, such as bath powders, body lotions, gels, powders and creams, nail polishes, cosmetic including make-up, toothpastes and other dentifrices, soaps, cosmetics, body paints, and bubble bath, bubbles made from non-detergent sources, particularly proteins such as albumin and other non-toxic proteins; in fishing lures and glowing transgenic worms, particularly crosslinked polyacrylamide containing a fluorescent protein and/or components of a bioluminescence generating system, which glow upon contact with water; items such as inks, paper; foods, such as gelatins, icings and frostings; fish food containing luciferins and transgenic animals, such as transgenic fish, worms, monkeys, rodents, ungulates, ovine, ruminants and others, that express a luciferase and/or Renilla reniformis GFP; transgenic worms that express Renilla reniformis GFP and are used as lures; plant food containing a luciferin or luciferase, preferably a luciferin for use with transgenic plants that express luciferase and Renilla reniformis GFP, transgenic plants that express Renilla reniformis GFP, particularly ornamental plants, such as orchids, roses, and other plants with decorative flowers; transgenic plants and animals in which the Renilla reniformis GFP is a marker for tracking introduction of other genes; and beverages, such as beer, wine, champagne, soft drinks, milk and ice cubes and ice in other configurations containing Renilla reniformis GFP; fountains, including liquid "fireworks" and other such jets or sprays or aerosols of compositions that are solutions, mixtures, suspensions, powders, pastes, particles or other suitable form.

Summary of Invention Paragraph - BSTX (70):

[0068] Kits containing the GFPs for use in the methods, including those described herein, are provided. In one embodiment, the kits containing an article of manufacture and appropriate reagents for generating bioluminescence are provided. The kits containing such soap compositions, with preferably a moderate Ph (between 5 and 8) and bioluminescence generating reagents, including luciferase and luciferin and the GFP are provided herein. These kits, for example, can be used with a bubble-blowing or producing toy. These kits can also include a reloading or charging cartridge or can be used in connection with a food.

Detail Description Paragraph - DETX (182):

[0261] GFPs, including the Renilla reniformis protein provided herein, are activated by blue light to emit green light and thus may be used in the absence of luciferase and in conjunction with an external light source with novelty items (see U.S. Pat. Nos. 5,876,995, 6,152,358 and 6,113,886) and in conjunction with bioluminescence generating system for novelty items (see U.S. Pat. Nos. 5,876,995, 6,152,358 and 6,113,886), for tumor diagnosis (see, allowed co-pending U.S. application Ser. No. 08/908,909) and in biochips (see, U.S. application Ser. No. 08/990,103, which is published as International PCT application No. WO 98/26277).

Detail Description Paragraph - DETX (183):

[0262] Renilla reniformis GFP is intended for use in any of the novelty items and combinations, such as the foods, including beverages, greeting cards, and toys, including bubble making toys, particularly bubble-making compositions or mixtures. Also of particular interest are the use of these proteins in cosmetics, particularly face paints or make-up, hair colorants or hair conditioners, mousses or other such products and skin creams. Such systems are particularly of interest because no luciferase is needed to activate the photoprotein and because the proteins are non-toxic and safe to apply to the skin, hair, eyes and to ingest. These fluorescent proteins may also be used in addition to bioluminescence generating systems to enhance or create an array of different colors. Transgenic animals and plants that express the Renilla reniformis GFP-encoding nucleic acid are also provided. Such animals and plants, include transgenic fish, transgenic worms for use, for example, as lures for fishing; transgenic animals, such as monkeys and rodents for research in which a marker gene is used, and transgenic animals as novelty items and to produce glowing foods, such as ham, eggs, chicken, and other meats; transgenic plants in which the Renilla reniformis is a marker, and also transgenic plants that are novelty items, particularly ornamental plants, such as glowing orchids, roses and other flowering plants.

Detail Description Paragraph - DETX (438):

[0515] Renilla reniformis GFP can be used in combination with articles of manufacture to produce novelty items. The Renilla reniformis GFP can be used with a bioluminescence generating system. Such items and methods for preparation are described in detail in U.S. Pat. Nos. 5,876,995, 6,152,358 and 6,113,886) These novelty items, which are articles of manufacture, are designed for entertainment, recreation and amusement, and include, but are not limited to: toys, particularly squirt guns, toy cigarettes, toy "Halloween" eggs, footbags and board/card games; finger paints and other paints, slimy play material; textiles, particularly clothing, such as shirts, hats and sports gear suits, threads and yarns; bubbles in bubble making toys and other toys that produce bubbles; balloons; figurines; personal items, such as bath powders, body lotions, gels, powders and creams, nail polishes, cosmetics including make-up, toothpastes and other dentifrices, soaps, body paints, and bubble bath; items such as fishing lures, inks, paper; foods, such as gelatins, icings and frostings; fish food containing luciferins and transgenic fish, particularly transgenic fish that express a luciferase; plant food containing a luciferin or luciferase, preferably a luciferin for use with transgenic plants that express luciferase; and beverages, such as beer, wine, champagne, soft drinks, and ice cubes and ice in other configurations; fountains, including liquid "fireworks" and other such jets or sprays or aerosols of compositions that are solutions, mixtures, suspensions, powders, pastes, particles or other suitable form.

Detail Description Paragraph - DETX (455):

[0532] Kits may be prepared containing the Renilla reniformis GFP or the encoding nucleic acid moleucles (see, SEQ ID Nos. 23-26) with or without components of a bioluminescence generating system for use in diagnostic and immunoassay methods and with the novelty items, including those described herein.

Detail Description Paragraph - DETX (456):

[0533] In one embodiment, the kits contain appropriate reagents and an article of manufacture for generating bioluminescence in combination with the article. These kits, for example, can be used with a bubble-blowing or

producing toy or with a squirt gun. These kits can also include a reloading or charging cartridge.

Claims Text - CLTX (25):

24. The combination of claim 23, further comprising at least one component of a bioluminescence generating system, whereby the combination is a novelty item.

PGPUB-DOCUMENT-NUMBER: 20030066096

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030066096 A1

TITLE: Bioluminescent novelty items

PUBLICATION-DATE: April 3, 2003

US-CL-CURRENT: 800/8, 162/162 , 42/54 , 424/450 , 424/456 , 424/70.14 , 442/131

APPL-NO: 09/ 729133

DATE FILED: December 1, 2000

RELATED-US-APPL-DATA:

child 09729133 A1 20001201

parent continuation-of 09444762 19991122 US PENDING

child 09729133 A1 20001201

parent continuation-of 09135988 19980817 US PATENTED

child 09729133 A1 20001201

parent continuation-in-part-of 08757046 19961125 US PATENTED

child 09729133 A1 20001201

parent continuation-in-part-of 08597274 19960206 US PATENTED

non-provisional-of-provisional 60079624 19980327 US

non-provisional-of-provisional 60089367 19980615 US

RELATED APPLICATIONS

[0001] This applicaiton is a continuation of U.S. application Ser. No. 09/444,762 to Bruce Bryan, filed Nov. 22, 1999, entitled "BIOLUMINESCENT NOVELTY ITEMS." This application is also continuation of U.S. application Ser. No. 09/135,988 to Bruce Bryan, filed Aug. 17, 1998, now U.S. Pat. No. 6,152,358, entitled "BIOLUMINESCENT NOVELTY ITEMS." This application is also continuation-in-part of U.S. application Ser. No. 08/757,046 to Bruce Bryan, filed Nov. 25, 1996, now U.S. Pat. No. 5,876,995, entitled "BIOLUMINESCENT NOVELTY ITEMS." This application is also a continuation-in-part of U.S. application Ser. No. 08/597,274, now allowed, to Bruce Bryan, filed Feb. 6, 1996, entitled "BIOLUMINESCENT NOVELTY ITEMS".

[0002] U.S. application Ser. No. 09/444,762 is a continuation of U.S. application Ser. No. 09/135,988, which is a continuation-in-part of U.S. application Ser. No. 08/757,046, which is a continuation-in-part of U.S. application Ser. No. 08/597,274. The subject matter of each of U.S. application Ser. Nos. 09/135,988, 08/597,274 and 08/757,046 is herein incorporated in its entirety by reference thereto. This application is also

related to provisional application serial numbers 60/079,624 and 60/089,367. The disclosures of each of the above noted patents, applications and provisional applications is incorporated herein by reference thereto.

PGPUB-DOCUMENT-NUMBER: 20030059798

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030059798 A1

TITLE: Apparatus and method for detecting and identifying infectious agents

PUBLICATION-DATE: March 27, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Bryan, Bruce J.	Beverly Hills	CA	US	
Gaalema, Stephen	Colorado Springs	CO	US	
Murphy, Randall B.	Irvington	NY	US	

APPL-NO: 10/ 126798

DATE FILED: April 19, 2002

RELATED-US-APPL-DATA:

child 10126798 A1 20020419

parent division-of 08990103 19971212 US GRANTED

parent-patent 6458547 US

non-provisional-of-provisional 60037675 19970211 US

non-provisional-of-provisional 60033745 19961212 US

US-CL-CURRENT: 435/6

ABSTRACT:

Solid phase methods for the identification of an analyte in a biological medium, such as a body fluid, using bioluminescence are provided. A chip designed for performing the method and detecting the bioluminescence is also provided. Methods employing biomineralization for depositing silicon on a matrix support are also provided. A synthetic synapse is also provided.

RELATED APPLICATIONS

[0001] This application claims priority under 35 U.S.C. .sctn.119(e) to U.S. Provisional appplication Serial No. 60/037,675, filed Feb. 11, 1997 and to U.S. Provisional application Serial No. 60/033,745, filed Dec. 12, 1996.

[0002] Certain subject matter in this application is related to subject matter in U.S. application Ser. No. 08/757,046, filed Nov. 25, 1996, to Bruce Bryan entitled "BIOLUMINESCENT NOVELTY ITEMS" (B), and to U.S. application Ser. No. 08/597,274, filed Feb. 6, 1996, to Bruce Bryan, entitled "BIOLUMINESCENT NOVELTY ITEMS". This application is also related to U.S. application Ser. No. 08/908,909, filed Aug. 8, 1997, to Bruce Bryan entitled "DETECTION AND VISUALIZATION OF NEOPLASMS AND OTHER TISSUES" and to U.S. Provisional application Serial No. 60/023,374, filed Aug. 8, 1996, entitled "DETECTION AND VISUALIZATION OF NEOPLASMS AND OTHER TISSUES", and also to published

International PCT application No. WO _____.

[0003] The subject matter of each of the above noted U.S. applications, provisional applications and international application is herein incorporated by reference in its entirety.

---------- KWIC --------

Cross Reference to Related Applications Paragraph - CRTX (2):
[0002] Certain subject matter in this application is related to subject matter in U.S. application Ser. No. 08/757,046, filed Nov. 25, 1996, to Bruce Bryan entitled "BIOLUMINESCENT NOVELTY ITEMS" (B), and to U.S. application Ser. No. 08/597,274, filed Feb. 6, 1996, to Bruce Bryan, entitled "BIOLUMINESCENT NOVELTY ITEMS". This application is also related to U.S. application Ser. No. 08/908,909, filed Aug. 8, 1997, to Bruce Bryan entitled "DETECTION AND VISUALIZATION OF NEOPLASMS AND OTHER TISSUES" and to U.S. Provisional application Serial No. 60/023,374, filed Aug. 8, 1996, entitled "DETECTION AND VISUALIZATION OF NEOPLASMS AND OTHER TISSUES", and also to published International PCT application No. WO _____.

Detail Description Paragraph - DETX (249):
[0298] GFPs are activated by blue light to emit green light and thus may be used in the absence of luciferase and in conjunction with an external light source with novelty items, as described herein. Similarly, blue fluorescent proteins (BFPs), such as from Vibrio fischeri, Vibrio harveyi or Photobacterium phosphoreum, may be used in conjunction with an external light source of appropriate wavelength to generate blue light. (See for example, Karatani, et al., "A blue fluorescent protein from a yellow-emitting luminous bacterium," Photochem. Photobiol. 55(2):293-299 (1992); Lee, et al., "Purification of a blue-fluorescent protein from the bioluminescent bacterium Photobacterium phosphoreum" Methods Enzymol. (Biolumin. Chemilumin.) 57:226-234 (1978); and Gast, et al. "Separation of a blue fluorescence protein from bacterial luciferase" Biochem. Biophys. Res. Commun. 80(1):14-21 (1978), each, as all references cited herein, incorporated in its entirety by reference herein.) In particular, GFPs, and/or BFPs or other such fluorescent proteins may be used in the methods provided herein for the detection of infectious agents by binding an analyte to one or more anti ligand-GFP conjugate(s) at a plurality of locations and illuminating the chip with light of an appropriate wavelength to cause the fluorescent proteins to fluoresce whereby the emitted fluorescence is detected by the photodiodoes in the chip.

US-PAT-NO: 6682899

DOCUMENT-IDENTIFIER: US 6682899 B2

TITLE: Apparatus and method for detecting and identifying infectious agents

DATE-ISSUED: January 27, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bryan; Bruce J.	Beverly Hills	CA	N/A	N/A
Gaalema; Stephen	Colorado Springs	CO	N/A	N/A
Murphy; Randall B.	Irvington	NY	N/A	N/A

APPL-NO: 10/ 126777

DATE FILED: April 19, 2002

PARENT-CASE:

RELATED APPLICATIONS

This application is a divisional of application Ser. No. 08/990,103 filed Dec. 12, 1997 now U.S. Pat. No. 6,458,547. This application claims priority under 35 U.S.C. .sctn.119(e) to U.S. Provisional application Ser. No. 60/037,675, filed Feb. 11, 1997 and to U.S. Provisional application Ser. No. 60/033,745, filed Dec. 12, 1996.

Certain subject matter in this application is related to subject matter in U.S. application Ser. No. 08/757,046, filed Nov. 25, 1996, to Bruce Bryan entitled "BIOLUMINESCENT NOVELTY ITEMS" (B), and to U.S. application Ser. No. 08/597,274, filed Feb. 6, 1996, to Bruce Bryan, entitled "BIOLUMINESCENT NOVELTY ITEMS". This application is also related to U.S. application Ser. No. 08/908,909, filed Aug. 8, 1997, to Bruce Bryan entitled "DETECTION AND VISUALIZATION OF NEOPLASMS AND OTHER TISSUES" and to U.S. Provisional application Serial No. 60/023,374, filed Aug. 8, 1996, entitled "DETECTION AND VISUALIZATION OF NEOPLASMS AND OTHER TISSUES", and also to published International PCT application No. WO 97/29,319.

The subject matter of each of the above noted U.S. applications, provisional applications and International application is herein incorporated by reference in its entirety.

US-CL-CURRENT: 435/7.1, 356/215 , 356/222 , 356/317 , 422/57 , 422/58 , 422/68.1 , 422/82.05 , 422/82.08 , 427/162 , 427/167 , 427/8 , 435/283.1 , 435/288.7 , 435/4 , 435/6 , 435/7.9 , 435/7.92 , 435/808 , 435/973 , 435/975 , 436/164 , 436/172 , 436/518 , 436/524 , 436/527 , 436/805

ABSTRACT:

Solid phase methods for the identification of an analyte in a biological medium, such as a body fluid, using bioluminescence are provided. A chip designed for performing the method and detecting the bioluminescence is also provided. Methods employing biomineralization for depositing silicon on a matrix support are also provided. A synthetic synapse is also provided.

1 Claims, 24 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 19

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Parent Case Text - PCTX (3):
Certain subject matter in this application is related to subject matter in U.S. application Ser. No. 08/757,046, filed Nov. 25, 1996, to Bruce Bryan entitled "BIOLUMINESCENT NOVELTY ITEMS" (B), and to U.S. application Ser. No. 08/597,274, filed Feb. 6, 1996, to Bruce Bryan, entitled "BIOLUMINESCENT NOVELTY ITEMS". This application is also related to U.S. application Ser. No. 08/908,909, filed Aug. 8, 1997, to Bruce Bryan entitled "DETECTION AND VISUALIZATION OF NEOPLASMS AND OTHER TISSUES" and to U.S. Provisional application Serial No. 60/023,374, filed Aug. 8, 1996, entitled "DETECTION AND VISUALIZATION OF NEOPLASMS AND OTHER TISSUES", and also to published International PCT application No. WO 97/29,319.

Detailed Description Text - DETX (187):
GFPs are activated by blue light to emit green light and thus may be used in the absence of luciferase and in conjunction with an external light source with novelty items, as described herein. Similarly, blue fluorescent proteins (BFPs), such as from Vibrio fischeri, Vibrio harveyi or Photobacterium phosphoreum, may be used in conjunction with an external light source of appropriate wavelength to generate blue light. (See for example, Karatani, et al., "A blue fluorescent protein from a yellow-emitting luminous bacterium," Photochem. Photobiol. 55(2):293-299 (1992); Lee, et al., "Purification of a blue-fluorescent protein from the bioluminescent bacterium Photobacterium phosphoreum" Methods Enzymol. (Biolumin. Chemilumin.) 57:226-234 (1978); and Gast, et al. "Separation of a blue fluorescence protein from bacterial luciferase" Biochem. Biophys. Res. Commun. 80(1):14-21 (1978), each, as all references cited herein, incorporated in its entirety by reference herein.) In particular, GFPs, and/or BFPs or other such fluorescent proteins may be used in the methods provided herein for the detection of infectious agents by binding an analyte to one or more anti ligand-GFP conjugate(s) at a plurality of locations and illuminating the chip with light of an appropriate wavelength to cause the fluorescent proteins to fluoresce whereby the emitted fluorescence is detected by the photodiodoes in the chip.

US-PAT-NO: 6676269

DOCUMENT-IDENTIFIER: US 6676269 B1

TITLE: Glow cup system

DATE-ISSUED: January 13, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Dorney; Peter	Casselberry	FL	N/A	N/A

APPL-NO: 10/ 261729

DATE FILED: October 1, 2002

US-CL-CURRENT: 362/34, 362/101

ABSTRACT:

A glow cup system has an inner cup with an outwardly extending lip adjacent its open top and a circular base adjacent its closed bottom with an upwardly extending recess. An outer cup is coupled to an outwardly extending lip of the inner cup. A first chemiluminescent fluid is retained within an enclosed space formed between the inner and outer cups. A first chemiluminescent fluid adapted to be retained within the enclosed space. An ampule containing a second chemiluminescent fluid is positioned within the enclosed space adjacent to the recess in the closed bottom of the inner cup.

4 Claims, 5 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 3

---------- KWIC ---------

Brief Summary Text - BSTX (6):

By way of example, U.S. Pat. No. 5,171,081 to Pita et al. discloses a chemiluminescent reactive vessel. U.S. Pat. No. 3,354,828 to Shefler et al. disclsoes an emergency light unit. U.S. Pat. No. 3,735,113 to Stott discloses an optical display. U.S. Pat. No. 4,064,428 to Van Zandt discloses a chemical light device. U.S. Pat. No. 4,379,320 to Mohan et al. discloses a chemical lighting device. U.S. Pat. No. 4,563,726 to Newcomb et al discloses an illuminated chemiluminescent drinking mug. U.S. Pat. No. 4,814,949 to Ellott discloses a chemiluminescent device. U.S. Pat. No. 5,018,450 to Smith discloses a luminescent paintball for marking nighttime impacts. U.S. Pat. No. 5,044,509 to Petrosky et al. discloses an infant nursing bottle and luminescent indicator. U.S. Pat. No. 5,067,051 to Ladyjensky discloses a chemiluminescent lighting element. U.S. Pat. No. 6,254,247 to Carson discloses illuminable containers and method. U.S. Pat. No. 6,247,995 to Bryan discloses bioluminescent novelty items. U.S. Pat. No. 6,152,358 to Bryan discloses bioluminescent novelty items. U.S. Pat. No. 6,113,886 to Bryan discloses bioluminescent novelty items. U.S. Pat. No. 6,062,380 to Dorney discloses a glow cup system. U.S. Pat. No. 5,671,998 to Collet discloses and assembly device combining a container and a chemiluminescent

light source. Finally, U.S. Pat. No. 5,609,409 to Diehl discloses a chemiluminescent stemmed drinking glass.

US-PAT-NO: 6649357

DOCUMENT-IDENTIFIER: US 6649357 B2

TITLE: Apparatus and method for detecting and identifying infectious agents

DATE-ISSUED: November 18, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bryan; Bruce J.	Beverly Hills	CA	N/A	N/A
Gaalema; Stephen	Colorado Springs	CO	N/A	N/A
Murphy; Randall B.	Irvington	NY	N/A	N/A

APPL-NO: 10/ 126798

DATE FILED: April 19, 2002

PARENT-CASE:

RELATED APPLICATIONS

This application is a divisional of application Ser. No. 08/990,103 filed Dec. 12, 1997 now U.S. Pat. No. 6,458,547. This application claims priority under 35 U.S.C. .sctn.119(e) to U.S. Provisional application Serial No. 60/037,675, filed Feb. 11, 1997 and to U.S. Provisional application Serial No. 60/033,745, filed Dec. 12, 1996.

Certain subject matter in this application is related to subject matter in U.S. application Ser. No. 08/757,046, filed Nov. 25, 1996, to Bruce Bryan entitled "BIOLUMINESCENT NOVELTY ITEMS" (B), and to U.S. application Ser. No. 08/597,274, filed Feb. 6, 1996, to Bruce Bryan, entitled "BIOLUMINESCENT NOVELTY ITEMS". This application is also related to U.S. application Ser. No. 08/908,909, filed Aug. 8, 1997, to Bruce Bryan entitled "DETECTION AND VISUALIZATION OF NEOPLASMS AND OTHER TISSUES" and to U.S. Provisional application Serial No. 60/023,374, filed Aug. 8, 1996, entitled "DETECTION AND VISUALIZATION OF NEOPLASMS AND OTHER TISSUES", and also to published International PCT application No. WO _____.

The subject matter of each of the above noted U.S. applications, provisional applications and international application is herein incorporated by reference in its entirety.

US-CL-CURRENT: 435/7.1, 356/215 , 356/222 , 356/317 , 422/57 , 422/58 , 422/68.1 , 422/82.05 , 422/82.08 , 435/288.7 , 435/6 , 435/7.9 , 435/808 , 435/973 , 435/975 , 436/164 , 436/172 , 436/518 , 436/524 , 436/527 , 436/532 , 436/805

ABSTRACT:

Solid phase methods for the identification of an analyte in a biological medium, such as a body fluid, using bioluminescence are provided. A chip designed for performing the method and detecting the bioluminescence is also provided. Methods employing biomineralization for depositing silicon on a matrix support are also provided. A synthetic synapse is also provided.

12 Claims, 24 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 19

---------- KWIC ---------

Parent Case Text - PCTX (3):

Certain subject matter in this application is related to subject matter in U.S. application Ser. No. 08/757,046, filed Nov. 25, 1996, to Bruce Bryan entitled "BIOLUMINESCENT NOVELTY ITEMS" (B), and to U.S. application Ser. No. 08/597,274, filed Feb. 6, 1996, to Bruce Bryan, entitled "BIOLUMINESCENT NOVELTY ITEMS". This application is also related to U.S. application Ser. No. 08/908,909, filed Aug. 8, 1997, to Bruce Bryan entitled "DETECTION AND VISUALIZATION OF NEOPLASMS AND OTHER TISSUES" and to U.S. Provisional application Serial No. 60/023,374, filed Aug. 8, 1996, entitled "DETECTION AND VISUALIZATION OF NEOPLASMS AND OTHER TISSUES", and also to published International PCT application No. WO _____.

Detailed Description Text - DETX (185):

GFPs are activated by blue light to emit green light and thus may be used in the absence of luciferase and in conjunction with an external light source with novelty items, as described herein. Similarly, blue fluorescent proteins (BFPs), such as from Vibrio fischeri, Vibrio harveyi or Photobacterium phosphoreum, may be used in conjunction with an external light source of appropriate wavelength to generate blue light. (See for example, Karatani, et al., "A blue fluorescent protein from a yellow-emitting luminous bacterium," Photochem. Photobiol. 55(2):293-299 (1992); Lee, et al., "Purification of a blue-fluorescent protein from the bioluminescent bacterium Photobacterium phosphoreum" Methods Enzymol. (Biolumin. Chemilumin.) 57:226-234 (1978); and Gast, et al. "Separation of a blue fluorescence protein from bacterial luciferase" Biochem. Biophys. Res. Commun. 80(1):14-21 (1978), each, as all references cited herein, incorporated in its entirety by reference herein.) In particular, GFPs, and/or BFPs or other such fluorescent proteins may be used in the methods provided herein for the detection of infectious agents by binding an analyte to one or more anti ligand-GFP conjugate(s) at a plurality of locations and illuminating the chip with light of an appropriate wavelength to cause the fluorescent proteins to fluoresce whereby the emitted fluorescence is detected by the photodiodoes in the chip.

US-PAT-NO: 6649356

DOCUMENT-IDENTIFIER: US 6649356 B2

TITLE: Apparatus and method for detecting and identifying infectious agents

DATE-ISSUED: November 18, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bryan; Bruce J.	Beverly Hills	CA	N/A	N/A
Gaalema; Stephen	Colorado Springs	CO	N/A	N/A
Murphy; Randall B.	Irvington	NY	N/A	N/A

APPL-NO: 10/ 126139

DATE FILED: April 19, 2002

PARENT-CASE:

RELATED APPLICATIONS

This application is a divisional of application Ser. No. 08/990,103 filed Dec. 12, 1997 now U.S. Pat. No. 6,458,547.This application claims priority under 35 U.S.C. .sctn.119(e) to U.S. Provisional application Serial No. 60/037,675, filed Feb. 11, 1997 and to U.S. Provisional application Serial No. 60/033,745, filed Dec. 12, 1996.

Certain subject matter in this application is related to subject matter in U.S. application Ser. No. 08/757,046, filed Nov. 25, 1996, to Bruce Bryan entitled "BIOLUMINESCENT NOVELTY ITEMS" (B), and to U.S. application Ser. No. 08/597,274, filed Feb. 6, 1996, to Bruce Bryan, entitled "BIOLUMINESCENT NOVELTY ITEMS". This application is also related to U.S. application Ser. No. 08/908,909, filed Aug. 8, 1997, to Bruce Bryan entitled "DETECTION AND VISUALIZATION OF NEOPLASMS AND OTHER TISSUES" and to U.S. Provisional application Ser. No. 60/023,374, filed Aug. 8, 1996, entitled "DETECTION AND VISUALIZATION OF NEOPLASMS AND OTHER TISSUES", and also to published International PCT application No. WO 97/29,319.

The subject matter of each of the above noted U.S. applications, provisional applications and International application is herein incorporated by reference in its entirety.

US-CL-CURRENT: 435/7.1, 356/215 , 356/222 , 356/317 , 422/57 , 422/58 , 422/68.1 , 422/82.05 , 422/82.08 , 435/288.7 , 435/6 , 435/7.9 , 435/808 , 435/973 , 435/975 , 436/122 , 436/164 , 436/518 , 436/524 , 436/527 , 436/532 , 436/805

ABSTRACT:

Solid phase methods for the identification of an analyte in a biological medium, such as a body fluid, using bioluminescence are provided. A chip designed for performing the method and detecting the bioluminescence is also provided. Methods employing biomineralization for depositing silicon on a matrix support are also provided. A synthetic synapse is also provided.

7 Claims, 24 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 19

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Parent Case Text - PCTX (3):
Certain subject matter in this application is related to subject matter in U.S. application Ser. No. 08/757,046, filed Nov. 25, 1996, to Bruce Bryan entitled "BIOLUMINESCENT NOVELTY ITEMS" (B), and to U.S. application Ser. No. 08/597,274, filed Feb. 6, 1996, to Bruce Bryan, entitled "BIOLUMINESCENT NOVELTY ITEMS". This application is also related to U.S. application Ser. No. 08/908,909, filed Aug. 8, 1997, to Bruce Bryan entitled "DETECTION AND VISUALIZATION OF NEOPLASMS AND OTHER TISSUES" and to U.S. Provisional application Ser. No. 60/023,374, filed Aug. 8, 1996, entitled "DETECTION AND VISUALIZATION OF NEOPLASMS AND OTHER TISSUES", and also to published International PCT application No. WO 97/29,319.

Detailed Description Text - DETX (149):
GFPs are activated by blue light to emit green light and thus may be used in the absence of luciferase and in conjunction with an external light source with novelty items, as described herein. Similarly, blue fluorescent proteins (BFPs), such as from Vibrio fischeri, Vibrio harveyi or Photobacterium phosphoreum, may be used in conjunction with an external light source of appropriate wavelength to generate blue light. (See for example, Karatani, et al., "A blue fluorescent protein from a yellow-emitting luminous bacterium," Photochem. Photobiol. 55(2):293-299 (1992); Lee, et al., "Purification of a blue-fluorescent protein from the bioluminescent bacterium Photobacterium phosphoreum" Methods Enzymol. (Biolumin. Chemilumin.) 57:226-234 (1978); and Gast, et al. "Separation of a blue fluorescence protein from bacterial luciferase" Biochem. Biophys. Res. Commun. 80(1):14-21 (1978), each, as all references cited herein, incorporated in its entirety by reference herein.) In particular, GFPs, and/or BFPs or other such fluorescent proteins may be used in the methods provided herein for the detection of infectious agents by binding an analyte to one or more anti ligand-GFP conjugate(s) at a plurality of locations and illuminating the chip with light of an appropriate wavelength to cause the fluorescent proteins to fluoresce whereby the emitted fluorescence is detected by the photodiodoes in the chip.

US-PAT-NO: 6596257

DOCUMENT-IDENTIFIER: US 6596257 B2

TITLE: Detection and visualization of neoplastic tissues and other tissues

DATE-ISSUED: July 22, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bryan; Bruce	Beverly Hills	CA	N/A	N/A

APPL-NO: 09/ 746485

DATE FILED: December 22, 2000

PARENT-CASE:

CROSS REFERENCE TO RELATED APPLICATION

This application is a continuation-in-part of U.S. Ser. No. 08/908,909 filed Aug. 8, 1997 to Bruce Bryan, entitled "DETECTION AND VISUALIZATION OF NEOPLASTIC TISSUES AND OTHER TISSUES" now U.S. Pat. No. 6,416,960. This application and U.S. application Ser. No. 08/908,909 claim the benefit of priority under 35 U.S.C. .sctn.119(e).to U.S. provisional application Ser. No. 60/023,374 to Bruce Bryan, filed Aug. 8, 1996, and entitled DETECTION AND VISUALIZATION OF NEOPLASMS AND OTHER TISSUES.

RELATED APPLICATIONS

Subject matter in this application is related to subject matter in allowed U.S. application Ser. No. 08/597,274 to Bruce Bryan, filed Feb. 6, 1996, entitled "BIOLUMINESCENT NOVELTY ITEMS", and U.S. application Ser. No. 08/757,046 to Bruce Bryan, filed Nov. 25, 1996, now U.S. Pat. No. 5,876,995, entitled "BIOLUMINESCENT NOVELTY ITEMS". The subject matter of each of U.S. application Ser. No. 08/597,274 and U.S. application Ser. No. 08/757,046, and U.S. provisional application Serial No. 60/023,374 is herein incorporated in its entirety by reference thereto.

US-CL-CURRENT: 424/9.1, 424/9.6

ABSTRACT:

Kits containing the diagnostic systems and diagnostic systems that rely on bioluminescence for visualizing tissues in situ are provided. The systems include compositions containing conjugates that include a tissue specific, particularly a tumor-specific, targeting agent linked to a targeted agent, a luciferase or luciferin. The systems also include a second composition that contains the remaining components of a bioluminescence generating reaction. Administration of the compositions results production of light by targeted tissues that permits the detection and localization of neoplastic tissue for surgical removal.

27 Claims, 0 Drawing figures

Exemplary Claim Number: 1

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Parent Case Text - PCTX (4):

Subject matter in this application is related to subject matter in allowed U.S. application Ser. No. 08/597,274 to Bruce Bryan, filed Feb. 6, 1996, entitled "BIOLUMINESCENT NOVELTY ITEMS", and U.S. application Ser. No. 08/757,046 to Bruce Bryan, filed Nov. 25, 1996, now U.S. Pat. No. 5,876,995, entitled "BIOLUMINESCENT NOVELTY ITEMS". The subject matter of each of U.S. application Ser. No. 08/597,274 and U.S. application Ser. No. 08/757,046, and U.S. provisional application Serial No. 60/023,374 is herein incorporated in its entirety by reference thereto.

US-PAT-NO: 6572244

DOCUMENT-IDENTIFIER: US 6572244 B1

TITLE: Novelty item having illuminating handle

DATE-ISSUED: June 3, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Clark; Jim	Tulsa	OK	74133	N/A

APPL-NO: 10/ 034577

DATE FILED: December 27, 2001

PARENT-CASE:

CROSS-REFERENCE TO RELATED APPLICATIONS

This is a continuation application of Ser. No. 09/480,028 filed on Jan. 10, 2000 abandoned.

US-CL-CURRENT: 362/253, 362/109 , 362/34 , 362/806 , 362/84

ABSTRACT:

The present invention is directed to an illuminated novelty item. In one embodiment, the novelty item includes an edible, food item supported on a hollow, translucent handle. A light source is also provided to illuminate the interior, hollow portion of the handle. Since the handle is translucent, the light radiated through the handle and into the edible food item. If the food item is translucent, which it preferable is, then the light also radiates through the food item in a unique and visually-desirable fashion. In one embodiment the food item is an ice confection, such as a Popsicle.RTM. Ice Confection. In another embodiment, the food item may be cotton candy. In yet another embodiment, the food item may be a sucker or lollipop, which is supported on a translucent handle in the same way as the ice confection mentioned above. Consistent with the invention, the light source may take on a variety of forms. In one embodiment, the light source may be a simple incandescent light that may be, for example, battery operated. Preferably, however, the light source is a passive (i.e., not requiring a battery or other power source) component, such as a bioluminescent or phosphorescent material. In the preferred embodiment, the light source may be a material such as a Glow Stick, Glow Worm, or other such device that is commonly sold at amusement parks.

11 Claims, 5 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 4

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Abstract Text - ABTX (1):

The present invention is directed to an illuminated novelty item. In one embodiment, the novelty item includes an edible, food item supported on a hollow, translucent handle. A light source is also provided to illuminate the interior, hollow portion of the handle. Since the handle is translucent, the light radiated through the handle and into the edible food item. If the food item is translucent, which it preferable is, then the light also radiates through the food item in a unique and visually-desirable fashion. In one embodiment the food item is an ice confection, such as a Popsicle.RTM. Ice Confection. In another embodiment, the food item may be cotton candy. In yet another embodiment, the food item may be a sucker or lollipop, which is supported on a translucent handle in the same way as the ice confection mentioned above. Consistent with the invention, the light source may take on a variety of forms. In one embodiment, the light source may be a simple incandescent light that may be, for example, battery operated. Preferably, however, the light source is a passive (i.e., not requiring a battery or other power source) component, such as a bioluminescent or phosphorescent material. In the preferred embodiment, the light source may be a material such as a Glow Stick, Glow Worm, or other such device that is commonly sold at amusement parks.

Brief Summary Text - BSTX (19):

Consistent with the invention, the light source may take on a variety of forms. In one embodiment, the light source may be a simple incandescent light that may be, for example, battery operated. Preferably, however, the light source is a passive (i.e., not requiring a battery or other power source) component, such as a bioluminescent or phosphorescent material. In the preferred embodiment, the light source may be a material such as a Glow Stick, Glow Worm, or other such device that is commonly sold at amusement parks. The handle of the novelty item may be a hollow, cylindrically-shaped handle appropriately sized such that a Glow Stick, Glow Worm, or other similar device may be inserted into the hollow space of the handle. In this way, the light that radiates from the light source radiates through the translucent handle and through the edible food item.

Detailed Description Text - DETX (7):

Consistent with the invention, the light source 106 may take on a variety of forms. In one embodiment, the light source 106 may be a simple incandescent light that may be, for example, battery operated. Preferably, however, the light source is a passive (i.e., not requiring a battery or other power source) component, such as a bioluminescent or phosphorescent material. In the preferred embodiment, the light source 106 may be a device such as a Glow Stick, Glow Worm, or other such device that is commonly sold at amusement parks. The handle of the novelty item 100 may include a hollow, cylindrically-shaped handle 104 appropriately sized such that a Glow Stick, Glow Worm, or other similar device may be inserted into the hollow space of the handle 104. In this way, the light that radiates from the light source 106 radiates through the translucent handle 104 and through the edible food item 102.

Claims Text - CLTX (7):

7. The novelty food item of claim 1 wherein the light source is a bioluminescent material.